

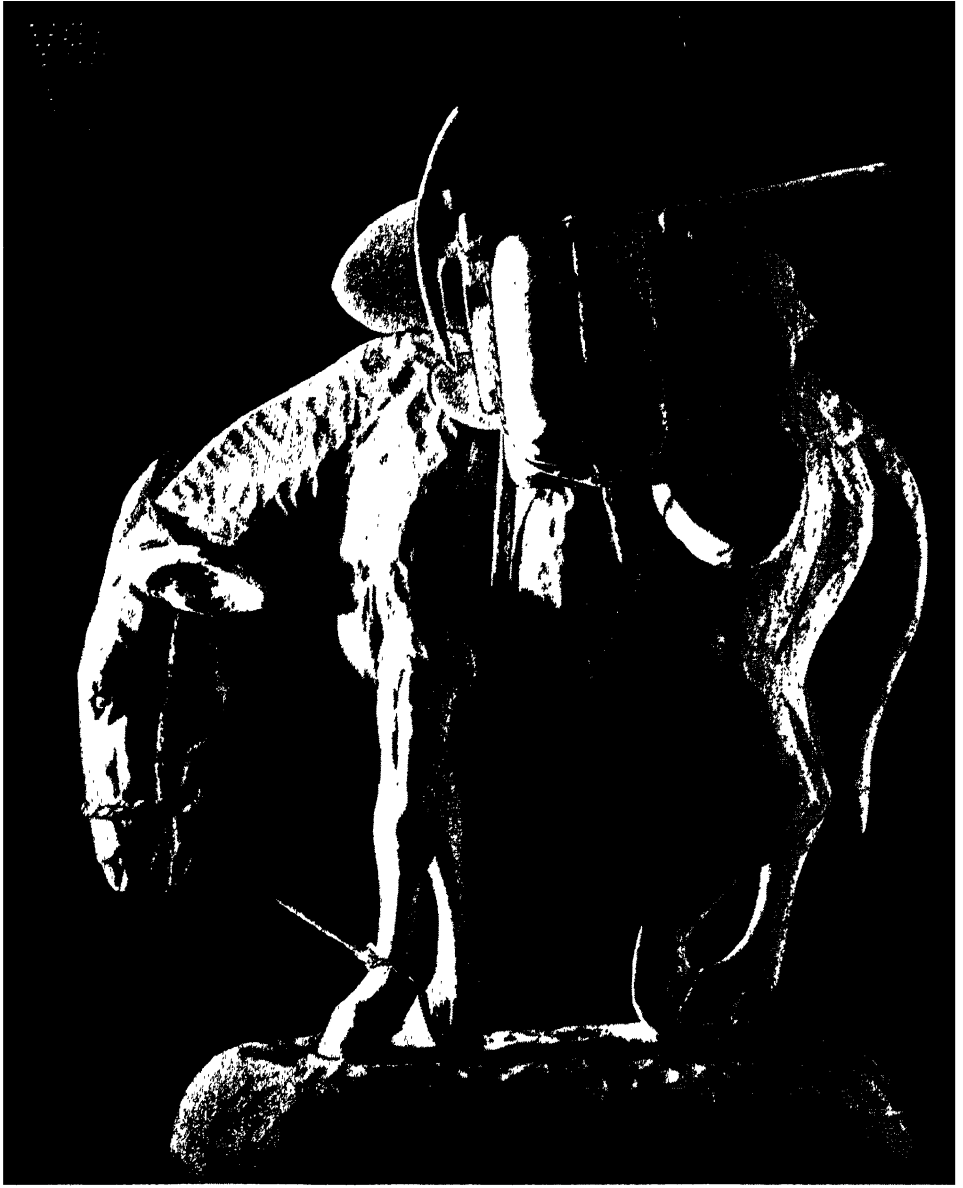
UNIVERSAL
LIBRARY



139 774

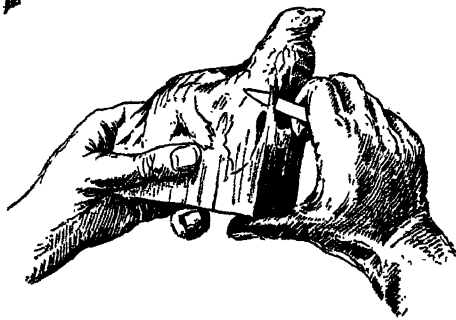
UNIVERSAL
LIBRARY

BEN HUNT'S WHITTTLING BOOK



Old sourdough's pack mule!

Ben Hunt's



**WHITTLING
BOOK**

**THE BRUCE PUBLISHING COMPANY
MILWAUKEE**

Copyright, 1944, by W. Ben. Hunt
Printed in the United States of America

This book is produced in full accord with the government rules and
regulations for the conservation of paper and other essential materials.

INTRODUCTION

In working with wood, whether it be fine cabinetmaking, Indian lore, pioneer work, or rustic construction, there are always a few details that require some kind of a pocketknife. Many find carving with a pocketknife so fascinating that they are interested in learning to perfect the manipulative skills in handling one of the simplest of the hand tools. Every man and boy — and girl too — should own a knife. A good knife is simple to sharpen and to keep sharp, and it is always handy for an endless variety of daily uses.

A prospective whittler should purchase a moderately priced knife and an oilstone or whetstone. A set of carving tools is not necessary.

The things I like may not interest other persons. But the subjects illustrated in the succeeding pages were selected to be of interest to students, boy scouts and girl scouts, home craftsmen, and teachers. They are intended as a basis for developing and guiding the beginner's own creative designs and self-expression in the art of whittling. The objects have been arranged in the order of their difficulty.

For those who are not artists and cannot design their own projects, there are many things that I hope will be interesting enough for beginners to whittle. After skill and confidence have been established there are a hundred and one things that can be made. If enthusiasm has been aroused, this book will have made itself worth while.

Whittling is an inexpensive and as clean a hobby as a boy or man could undertake. The whittler's workshop can be all outdoors, the woodshed, the kitchen, a basement room — wherever the whittler may be. On hot summer days what could be a better pastime than sitting in the shade with a good, sharp knife, a piece of wood, and a definite idea of what to whittle.

And let me add this: While everything in the following pages was whittled with a pocketknife, a crooked knife, and a reground penknife, I have no objection to the use of carving tools. In many situations they come in handy to make a bit of carving easier. But, the objects in this book were *whittled*, and anyone taking the time and patience can do the same.

W. B. H.

CONTENTS

Introduction	5
------------------------	---

HOW TO WHITTLE

Selecting Knives	11
Sharpening the Knife	15
Using a Pocketknife	17
Woods for Whittling	22

PROJECTS

Bark Whittling	23
Birds	24
Ducks	26
Penguins	29
Wooden Jewelry	32
Lapel Pins and Brooches	33
Belts, Necklaces, and Bracelets	34
Zipper Pulls and Necklaces	35
Buttons	35
Mayan Designs	37
Ornamental Brooches	38
Katcina Dolls	40
Neckerchief Slides	46
Totem Poles	49
Marquesas Island Stilt Steps	52
Turtle Paperweight	54
Scarlet Ibis	56
The Pensive Pelican	59
Loon	62
Bird Sticks — Kingfisher	65
Book Ends	68
Faces and Figures	73
A Set of Whittled Chessmen	75
Indian-Head Neckerchief Slide	78
Grizzly Bear	80
Ducks (for Wall Decorations or Lapel Pins)	88
Howling Wolf	85
Seal	97
Pack Mule	101
Whittling Spirals	106

BEN HUNT'S WHITTTLING BOOK

SELECTING KNIVES

Whittling really is carving with a knife. The word itself is used more in this country than in others, where it is referred to as carving. Wonderful carvings have been made by savage craftsmen from the far corners of the earth and actually they were whittled with the crudest kinds of knives. Probably because of their beauty they are called carvings, but, nevertheless, they were carved with a knife.

Some people think of whittling merely as wasting time by seeing how fine they can cut shavings from a straight-grained piece of white pine. But we will use the good old American term of "whittling" because knives instead of carving tools are going to be used.

There are four requisites for good whittling: a good knife, an oil- or whetstone, a good piece of wood, and an idea of what to make. Therefore, the first thing we will do is take up the question of knives. We know that the savages and people in out-of-the-way places, like the Eskimos, eagerly appropriate any little piece of iron or steel that can be made into knives and other tools.

The common pocketknife or jackknife is all one really needs to start whittling. Later on, a few odd-shaped knives will come in very handy.

Now, to buy a pocketknife. Naturally good steel is absolutely necessary, and good steel costs more than poor steel. A good knife usually has brass side plates, strong rivets, and stiff springs. The rivets prevent the blade from becoming wobbly, and the springs keep it from closing while cutting.

The grade of steel in a knife is never known until it has been tried out. Good steel means that a blade should stay sharp for a long time with ordinary whittling on softwoods. The edge should not bend over, nor chip when a knot is struck. Fancy handles do not make good knives. The handle should be smooth and from 3 to 3½ in. in length. A three-bladed knife is ideal (see F, Fig. 1). The large blade, shown in Figure 2, is used for heavy or rough cutting, and the small blades, shown in Figure 3, for close work. This knife should cost from one to three and a half dollars.

Figure 1, E, shows a good two-bladed knife. A lot more can and will be done with the small rather than the large blade as shown in Figure 4. This is where the value of the steel can be determined. The small blade must be able to take it. The best of steel will break with careless handling.

Another handy knife to have around is the skew knife (see D, Fig. 1). It can easily be made of a piece of steel, such as a power hack-saw blade

or a flat drill rod, or even by carefully grinding down a flat file or a broken palate knife, as shown in Figure 5.¹

The sloyd knife is also called to your attention (see A, Fig. 1). This is a very fine knife for youngsters because it will not close while cutting and is made of a better grade of steel. The blade shown in Figure 6 is a bit wide for fine work, but is suitable for making such objects as the katchina dolls.

Many carvers prefer using the reground desk knife, shown at C, Figure 1, and Figure 7. The knife has a solid handle. It can be made by grinding down an old paper or desk knife.

Many different shapes of knives are made, depending on the purpose for which they are intended. The Eskimo and our Woodland Indian make knives of iron or steel with a curved blade. These are called crooked knives (see B, Fig. 1) and while the Indian actually does not do a great deal of whittling, as we know it, he uses this knife to make birchbark canoes and

¹ See *Indianscraft*, W. Ben. Hunt, The Bruce Publishing Company, Milwaukee, Wis., for making the crooked and skew knife.

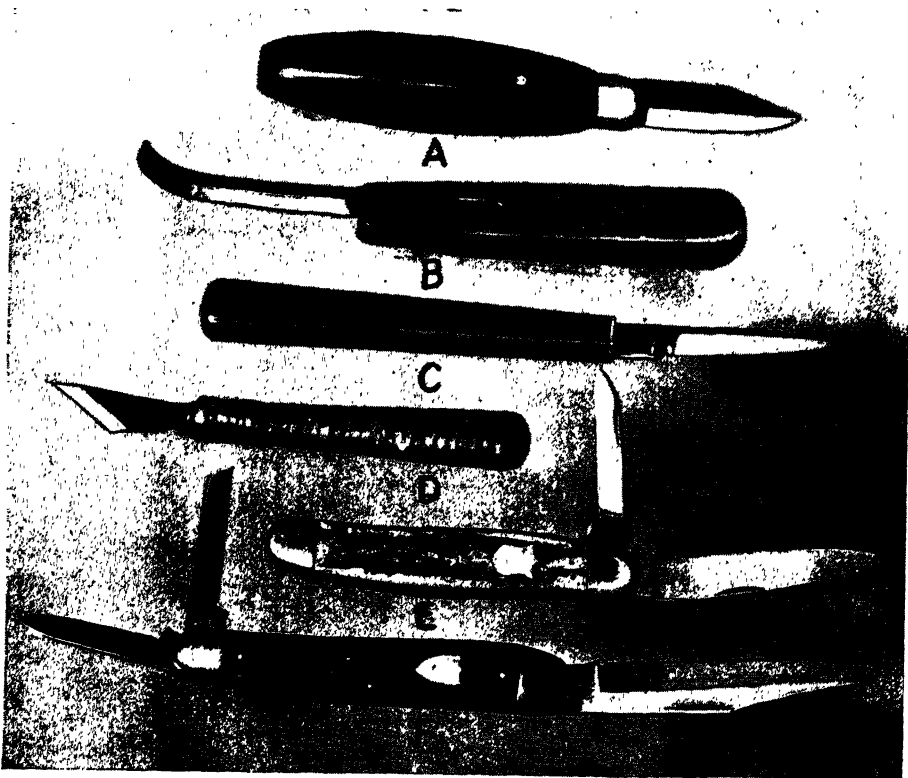
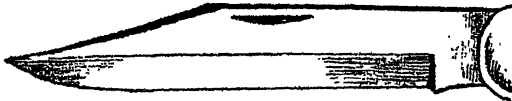
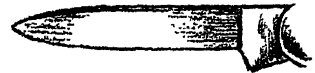


Fig. 1. The most popular types of knives. A, short-bladed sloyd knife; B, small crooked knife; C, knife made by grinding down an old paper knife; D, small skew knife made from a broken palate knife; E, 2-bladed pocketknife; F, 3-bladed pocketknife



A STRONG WELL SHAPED BLADE
FOR ROUGH WORK.

Fig. 2



A GOOD SMALL BLADE.



AND SAME AFTER
MANY SHARPENINGS.

Fig. 3



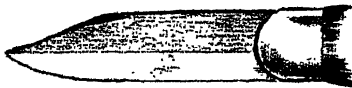
A LARGE THIN BLADE FOR
ALL-AROUND WORK.

Fig. 4



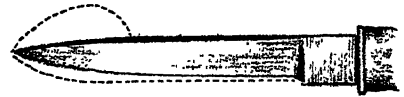
SMALL SKEW KNIFE MADE
FROM BROKEN PALATE KNIFE.

Fig. 5



SHORT BLADED SLOYD KNIFE.

Fig. 6

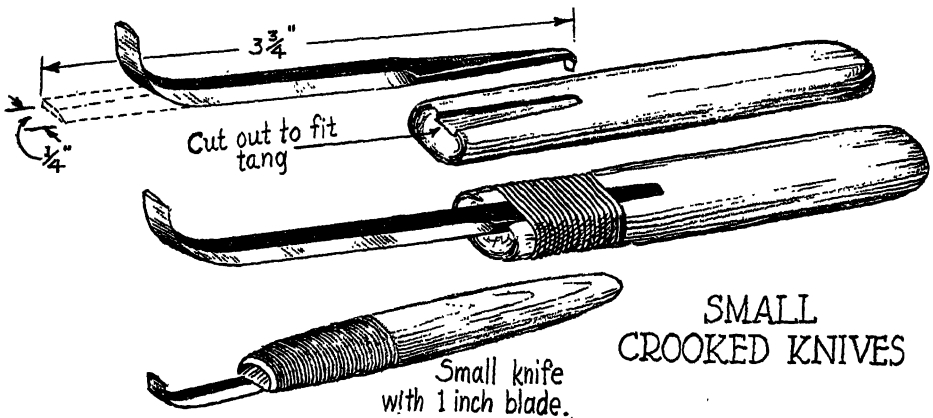


REGROUND DESK KNIFE
WITH SOLID HANDLE. THIS IS
TOPS FOR GENERAL WHITTLING.

Fig. 7

to whittle paddles, bowls, ladles, etc. The Eskimo uses his crooked knife to whittle wood, bone, and ivory. As craftsmen, the Eskimo and our west-coast Indian rank very highly.

A small crooked knife with a blade about 2 or 2½ in. long, as shown in Figure 8, used in the same manner as any other knife, is very handy at all times. This knife takes the place of the wood-carver's gouge. One can easily be made from a piece of tool steel or a small knife file.



SMALL
CROOKED KNIVES

Fig. 8

In doing a lot of whittling, it is only natural that occasionally you will cut your fingers. Remember that if the knife is held correctly the chance is reduced quite a bit.

You will also find that at the beginning your hands will tire very quickly and this is only natural. Blisters will also form, especially at the inner side of the second joint of the index finger. The thin leather band shown in Figure 13 will make it much easier. If your hands tire and blister, quit for a while and let them rest. After a few hours of whittling and resting, your hands will toughen up, while working at this delightful old Yankee pastime — whittling.

SHARPENING THE KNIFE

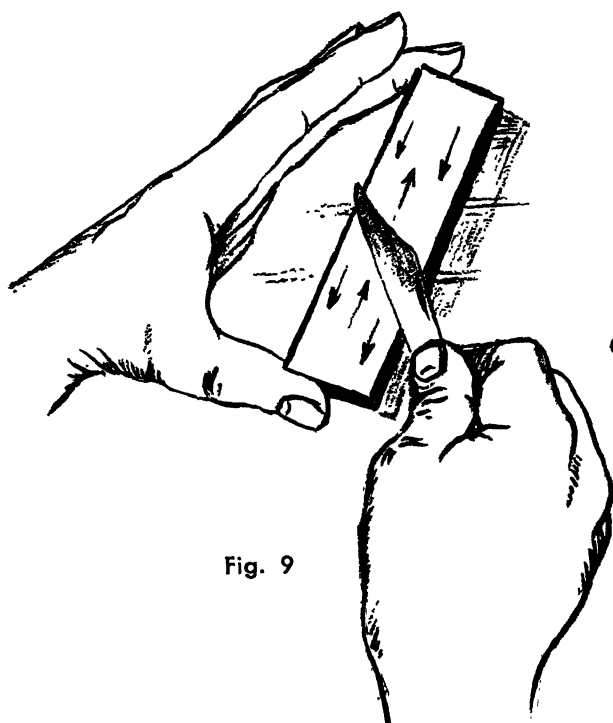


Fig. 9



Fig. 10

It is most important that a knife hold its edge, and next in importance is to give it that edge. The first method most people think of is an oilstone and it is probably the best. The author prefers a good whetstone because water is always handy, while fine oil is not always accessible. A good stone is one with a coarse surface on one side and a fine surface on the other. If a stone has only one surface, it should be a fine one. To sharpen a knife, lay the blade flat on the stone and then raise the back of the blade ever so little. Raising it too high forms a chisel edge which will not do for whittling (see Fig. 9).

Draw the knife back and forth over the stone, first one side and then the other (see Fig. 10), until the edge cannot be seen or until a fine wire edge appears. This is either removed by stropping on a good strop (see

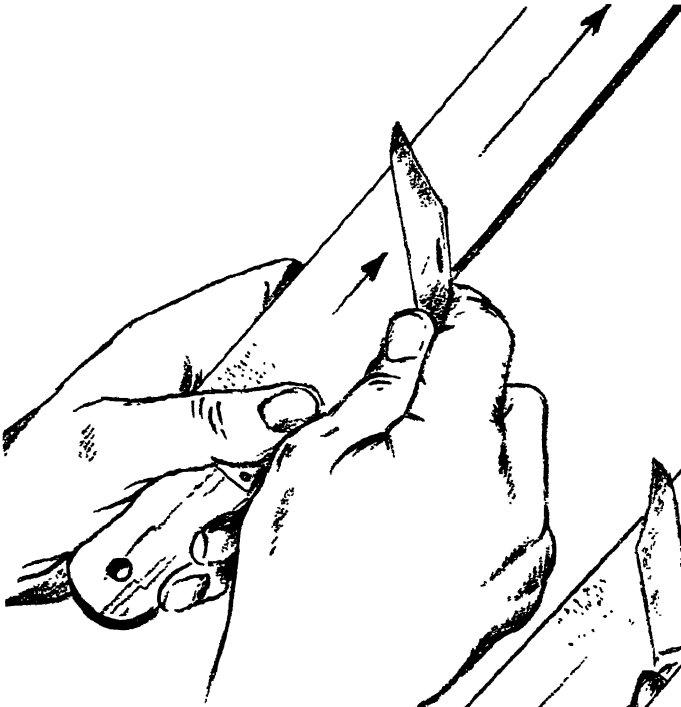


Fig. 11

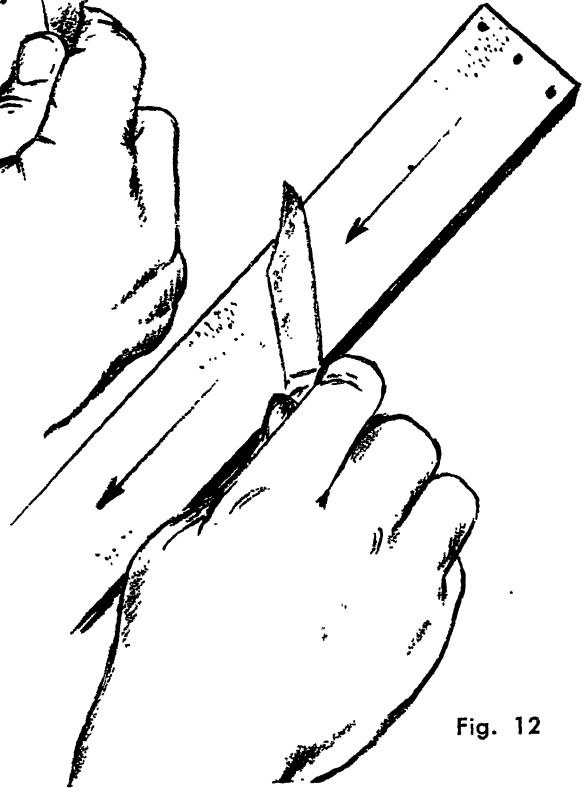


Fig. 12

Figs. 11 and 12), or on a buffing wheel, both dressed with rouge or buffing compound.

For a razor-sharp edge, a leather strop fastened to a piece of wood is necessary. This removes the wire edge and really gives the edge the proper finish. A strip of very fine emery or carborundum cloth, about $1\frac{1}{2}$ or $1\frac{3}{4}$ in. wide, tacked to a piece of wood of the same width also makes ideal sharpening equipment. Shoemakers often use this method, having the abrasive cloth on one side and the strop on the other (see Fig. 12). When using the sharpening stick, the blade should be drawn only one way, and in the same manner used in honing (see Figs. 11 and 12).

Although a beginner is very apt to cut himself more easily with a sharp knife, he cannot whittle successfully with a dull knife. At the same time there is not as much danger of a sharp blade slipping than as a dull blade.

USING A POCKETKNIFE

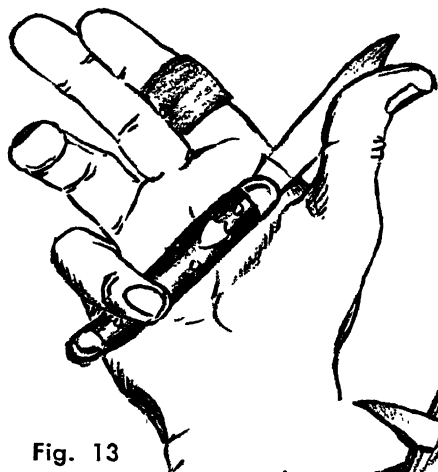


Fig. 13

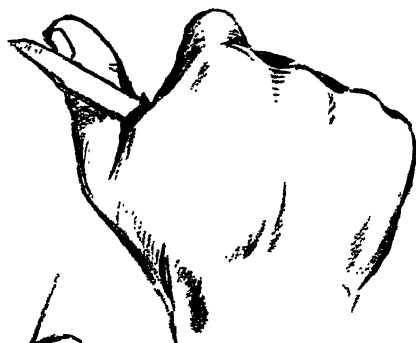


Fig. 14

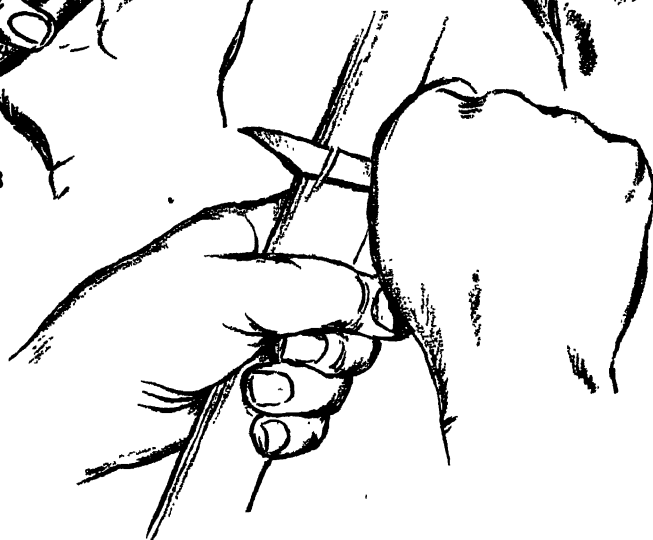


Fig. 15

In whittling, as in any craftwork, the first thing to learn is how to hold the tools that are to be used. A knife must be held firmly. Place the knife as shown in Figure 13, then close the fingers over the handle. The back of the blade should be set firmly in the crotch formed by the index finger and thumb as shown in Figure 14. No part of the handle should show at this point. Then lock the thumb over the index finger, bringing the handle of the knife tightly against the middle of the palm. Except for certain work, the thumb should not be placed on the back of the blade for cutting while whittling.

Figure 15 shows the firm grip that is to be used for all rough whittling. The left hand, with which the wood is held, should always be back of the

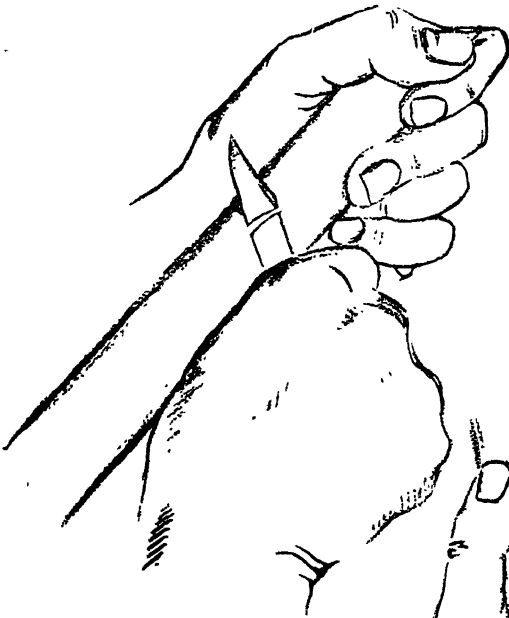


Fig 16

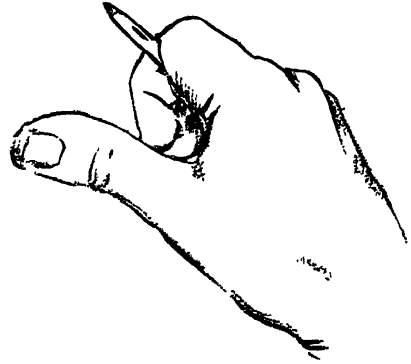


Fig. 17

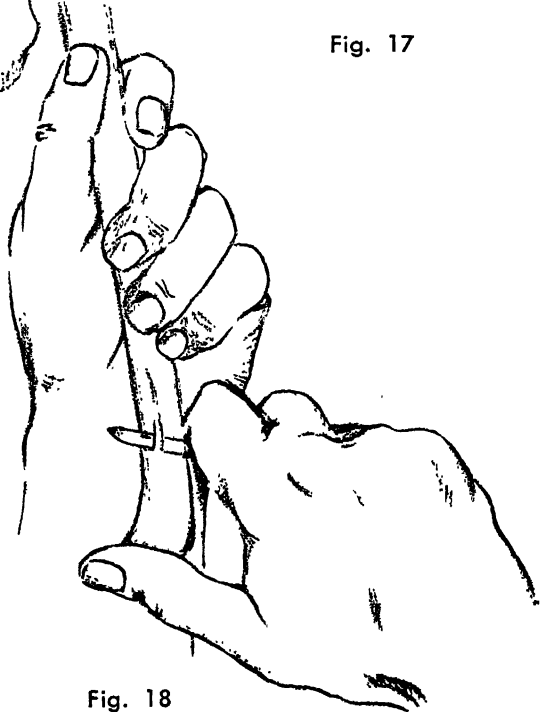


Fig. 18

blade away from the cutting edge. When it is necessary to cut toward one's self, the wood should be held as is shown in Figure 16. In this manner the cut can be controlled somewhat better than when cutting away from one's self. Figure 15 shows how to hold the wood for making long cuts and Figure 16 for short cuts.

Figure 17 shows how a knife is held for fine cutting. Notice how the forefinger closes around the base of the blade. When holding the knife this way there is no danger of cutting one's finger, as the blade lies absolutely flat.

The thumb may be used as a steady rest, and help to pull the blade when cutting (see Fig. 18). It plays a very important part in whittling.

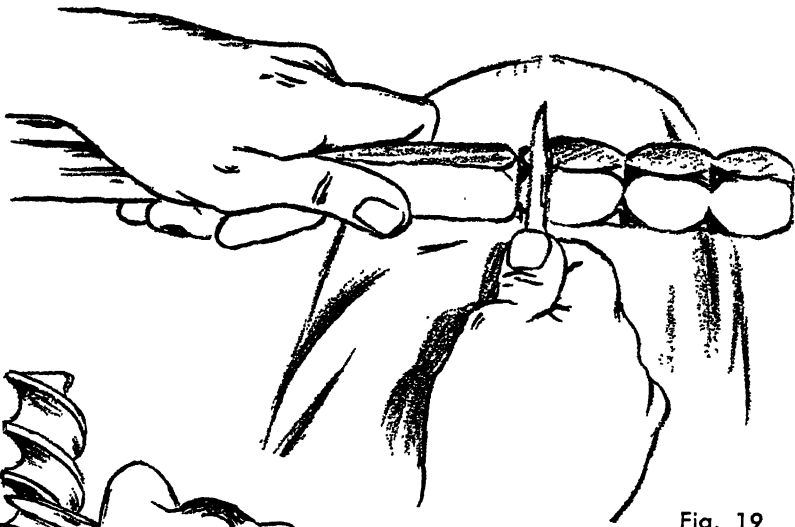


Fig. 19



Fig. 20

Figure 19 shows how the thumb is used on the back of the blade. In this position it is used in a pushing motion for cutting notches or cutting straight down into the wood. The stick in this case is usually rested on the knee.

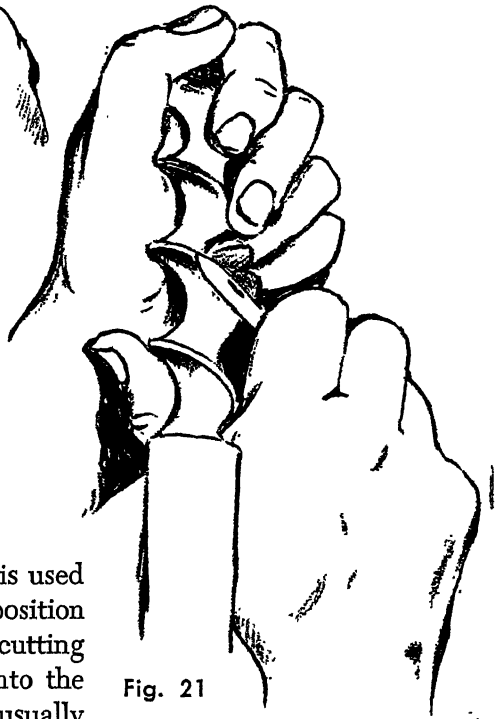


Fig. 21

Figure 20 shows how the thumb again is used to steady and pull the blade. In fine whittling, the thumb is generally rested on some part of the wood, sometimes merely to steady the blade and sometimes to help pull it through the wood.

Figure 21 shows the simplest and best method used for cutting spirals (see section on whittling spirals, page 106). Whittle the full length of the spiral first on one side, then reverse the stick end for end, and cut the

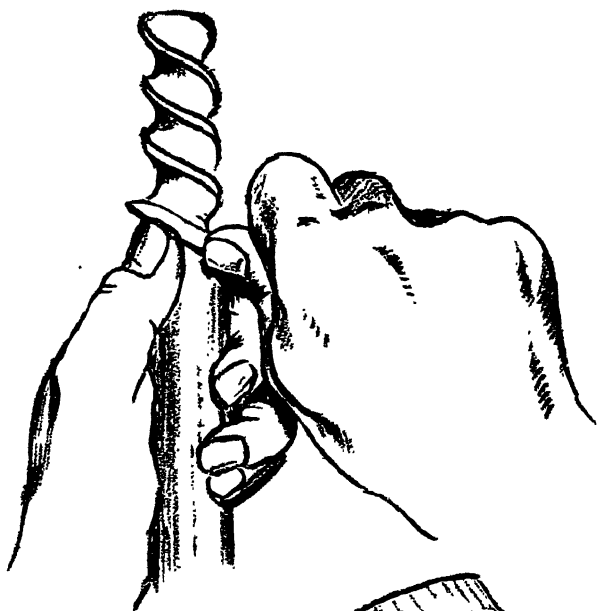


Fig. 22

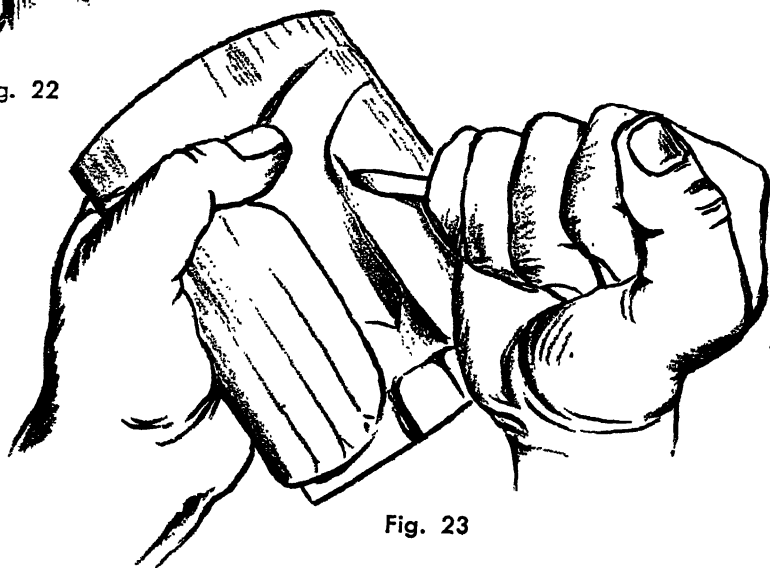


Fig. 23

other side. This action is repeated until the proper depth of the cut has been reached. Perfect control of the blade thus is had at all times.

The thumb also may be used to push the blade (see Fig. 22). It is useful when the grain of the wood is crooked, and when a careful cut is required. Notice in most of the illustrations that only as much of the blade as necessary projects beyond the clamp of the forefinger (see Fig. 23).

In Figure 23 is shown the method of making a deep cut. If this method is not used carefully, a small blade may be broken off very easily. The wood, of course, should rest on a knee or table. As there is no thumb to steady or regulate the cut, care should be taken when cutting near the edge of the wood, not to go too far as the blade may slip into one's knee.

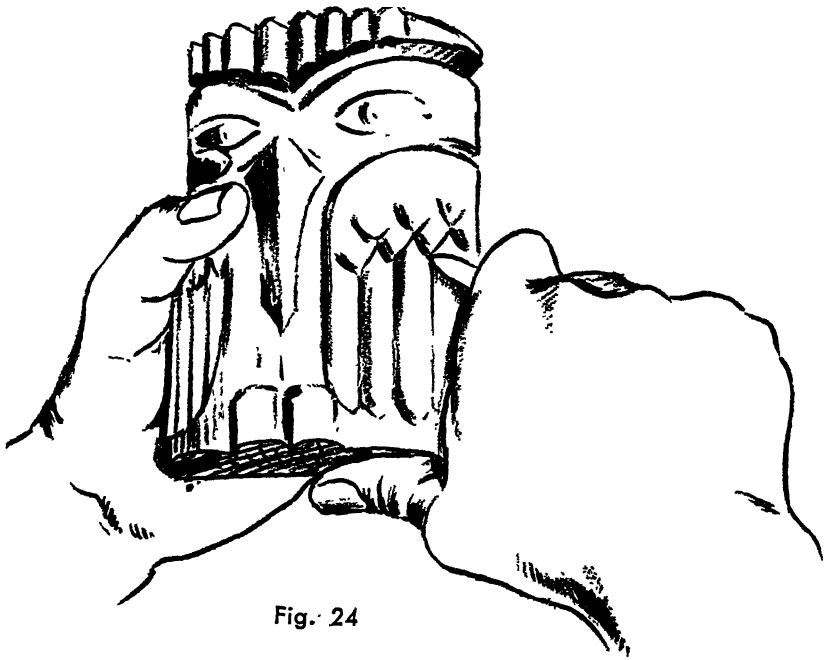


Fig. 24

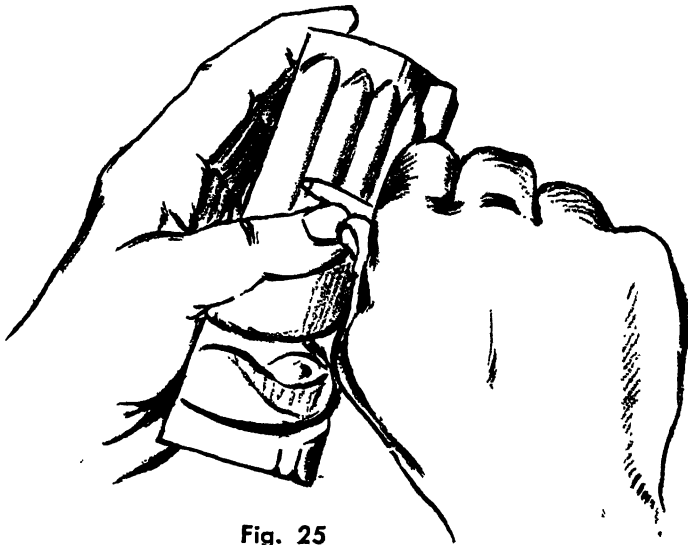


Fig. 25

Figures 24 and 25 show two more methods of making the same cut with less danger of slipping. It is well to remember that although the thumb is a wonderful steady rest and helps in many ways while whittling, it is not a very good stop for a sharp blade.

WOODS FOR WHITTLING

Softwood is usually the best for whittling. In the author's estimation Wisconsin and Michigan white pine is probably the most suitable, because it is free from knots, has very little grain, and is inexpensive. This wood is becoming rather scarce, and sugar pine is often sold in place of it. Sometimes choice pieces of white pine can be salvaged from old houses being wrecked. There are other soft pines which will work out very well also. Wood for whittling should be free from pitch.

If white pine is not available, the next choice is basswood, both seasoned or green. This is somewhat harder than pine but has a fine texture and is quite tough. Both dry and green poplar are also very good. The Hopi Indians of the southwest use cottonwood branches and roots for their katchina dolls. Cottonwood is very similar to poplar, being in the same group. Poplar is used quite extensively for crate lumber, but can also be obtained in planks 2 in. thick or heavier.

If possible, when whittling round objects, use green bass, poplar, willow, box elder, cedar, or, in fact, any native wood that contains no pitch or resin. These woods are easy to cut to shape and help to encourage the beginner's confidence to go ahead and do things.

Anyone starting to whittle, especially children, will be surprised how easily one's hands tire and become sore. Therefore, the softest woods should be used in the beginning. Balsa wood has not been mentioned because it is so soft that it will not stand any amount of handling and is not worth the effort.

Besides whittling things of wood, a pocketknife is handy for whittling a great many other materials, such as plastics, bone, horn, peach and plum stones, etc. Once the art of whittling is acquired, the pocketknife becomes indispensable.

BARK WHITTling

Probably the simplest and easiest kind of whittling is bark whittling as shown in Figure 26. This consists of creating a design by cutting away certain portions of bark from saplings or branches. Bark whittling is not recommended if the saplings or branches are cut in early spring when the sap is running. At this time, the bark is very readily removed, and the bark that is left on and is supposed to help make the design will also come off easily. The wood is ideal for carving, when there is very little or no sap running, that is, any time after spring or early summer.

Any kind of wood with a smooth bark will do — the thinner the bark the better. All saplings and branches for bark whittling can be cut and dried before whittling. This means a little more work and delay, but the danger of removing the wrong areas is not so great. When the sap is running, it is usually only necessary to cut straight down through the bark to the wood and lift out the sections to be removed. When dried, one must actually whittle out those sections. When dry, or partly so, one has the opportunity of making slanting cuts that help to make certain designs. The only trouble with bark whittling is that the field is rather limited, and it is only used for decoration. One can decorate hiking staffs, canes, paper knives, and neckerchief slides. The Indians decorated the poles used to support their willow beds with bark whittling.

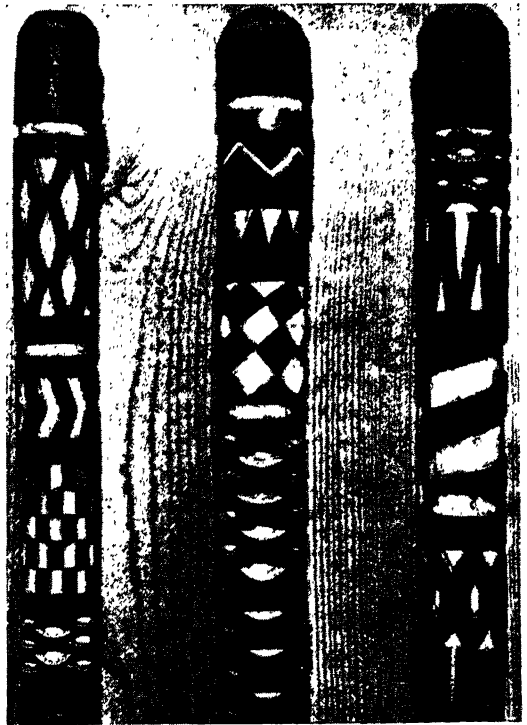


Fig. 26. A few suggested designs for bark whittling

BIRDS

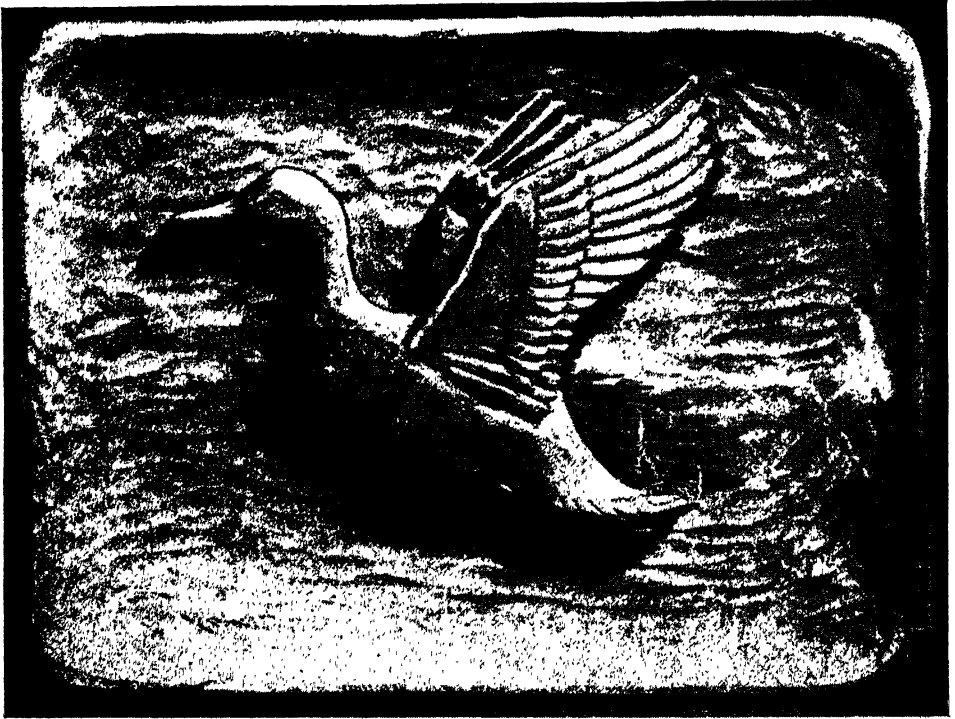


Fig. 27. A simple bird carving

“What shall I whittle?” That is probably the question that most beginners in whittling ask themselves. It is well to start with something rather small and something that can be made in a short while. (See Fig. 27.) Whittling miniature birds will be found very popular and enjoyable. They may be painted, or left in the raw wood to show proficiency of the whittler. If the small birds are to be painted they usually look better if they are sanded smoothly.

Figure 28 shows a duck in relief without the background. Trace and transfer the figure to a softwood board $\frac{1}{2}$ by 4 by 6 in. Make a vertical cut all the way around the figure, and cut away the background as shown in Figure 29. The finished background is shown in the forepart while the

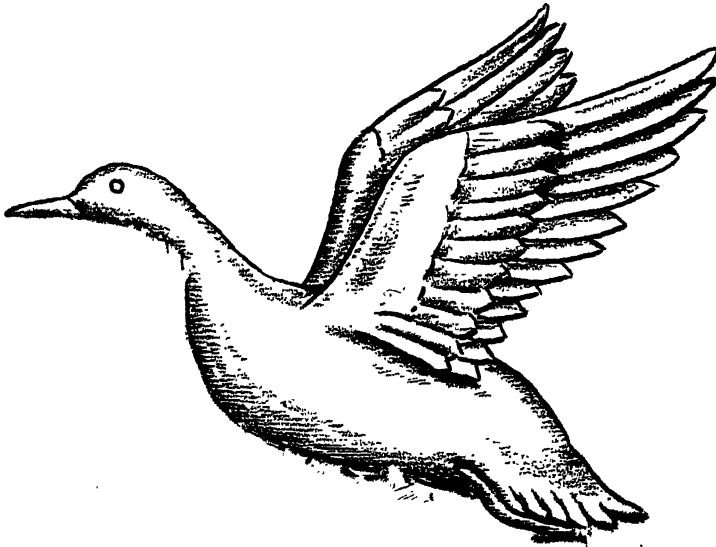


Fig. 28. The duck in relief without a background

first cuts are shown around the remainder of the duck. An Indian crooked knife will be found handy for removing the background.

After the background is smoothed, round the body contour and cut the feathers as shown in Figure 27.

A flock of ducks or geese in various positions can be cut out of $\frac{1}{4}$ -in. bass or pine board with a jig or coping saw, and whittled in relief. They can then be painted in natural colors and used for a wall decoration. When whittling in relief, be sure to cut the off wing, that is, the one on the far side, down to about half the thickness of the wing in the foreground to give it the proper perspective. Studies of birds can be found in many of the bird books in the libraries or museums. A more elaborate series of ducks may be found in a later section of this book.

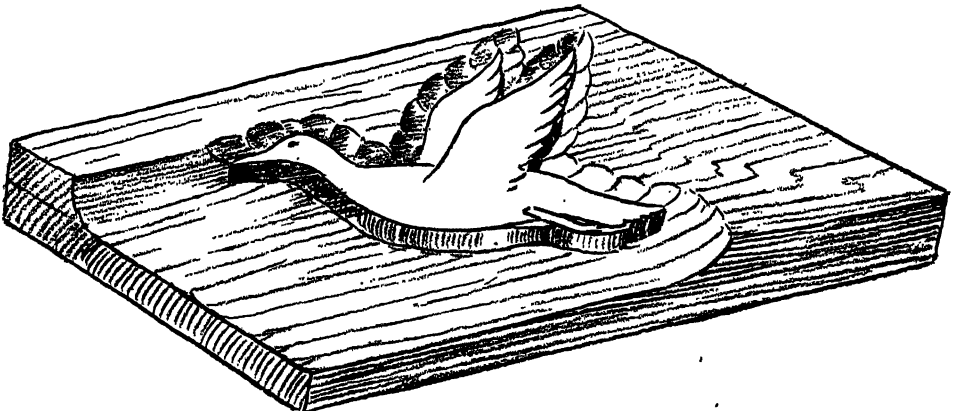
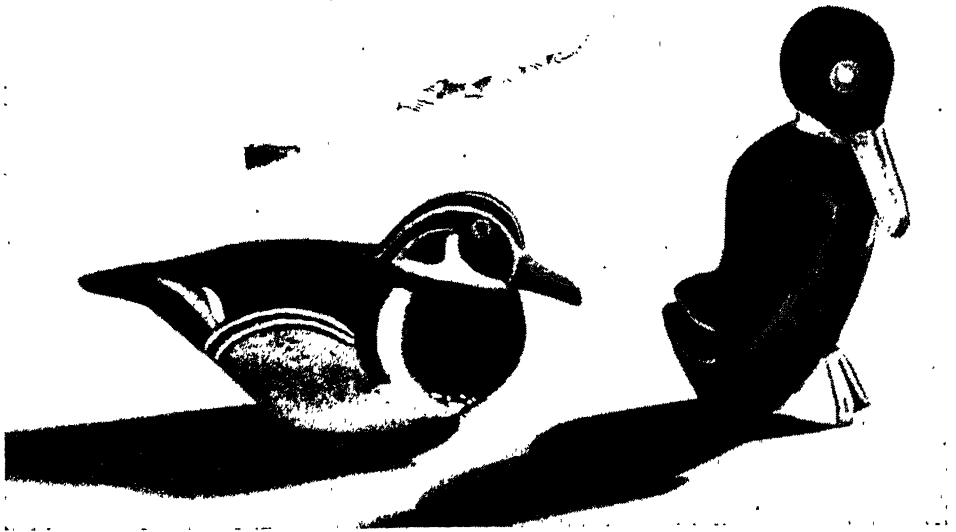


Fig. 29. Cutting away the background

DUCKS



A
Fig. 30. The finished ducks
B

The funny little duck shown at B, Figure 30, is not at all difficult to whittle. The illustrations are shown full size. Figure 31 illustrates how the side view is drawn on the block and how most of the wood can be cut away with an ordinary handsaw. Figure 32 shows the block roughed out ready for rounding and finishing. Full-size patterns for the front, side, and rear views can be seen in Figure 33.

This little duck looks exceedingly fine after it is painted (see B, Fig. 30). Mark off the areas to be painted with a lead pencil. Paint the beak, feet, and eyes orange, the head green, and the band at the neck yellow or white. Allow each color to dry thoroughly before applying the next. Then the breast is painted buff or light brown; and the wings, back, and tail a dark brown. Water color gives this duck a soft appearance, but enamels may be used if you want it to look like glazed pottery.

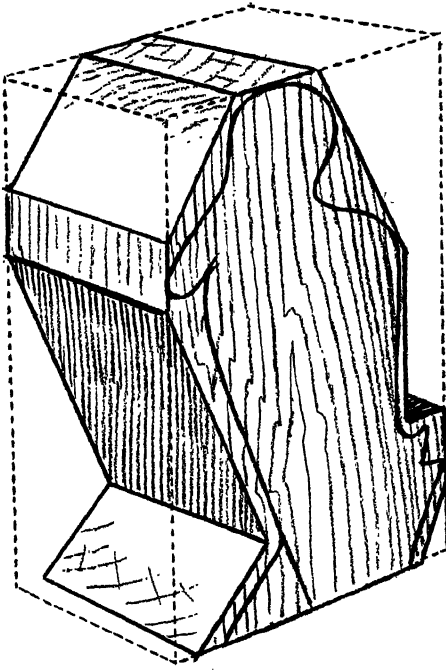


Fig. 31. Marking off the block

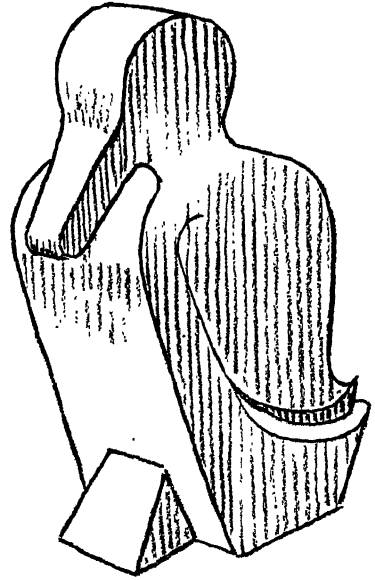


Fig. 32. The block roughed out and ready for finishing

Whittling out a miniature decoy duck is also very amusing, especially for the hunter who is looking forward to the next duck season. It may be painted attractively and if a hole is bored into the bottom and filled with lead, it may be used as a paperweight. A brightly colored wood duck is

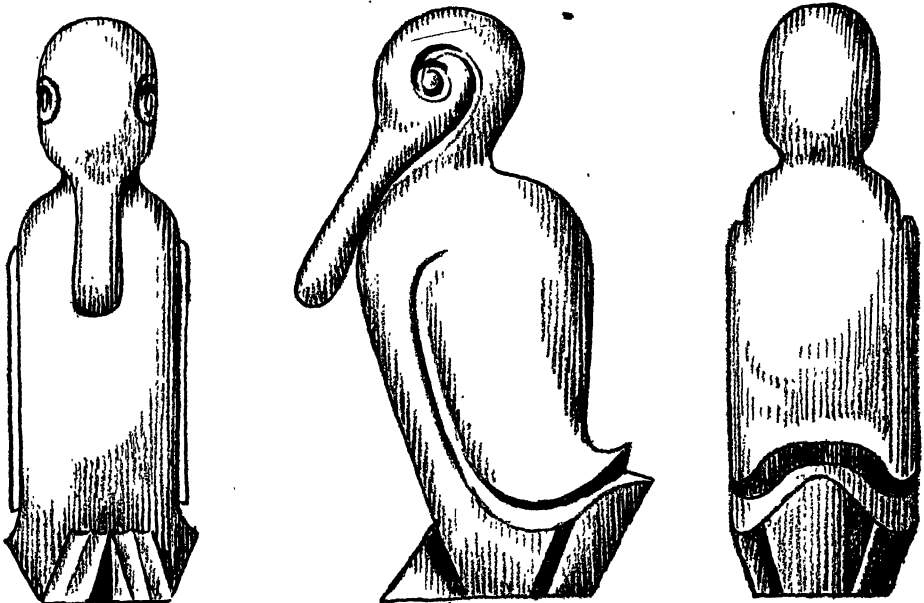


Fig. 33. Front, side, and rear views of duck

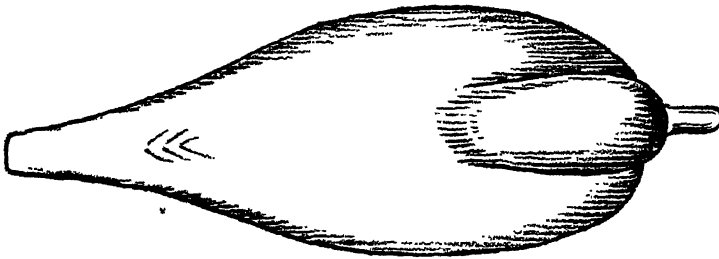


Fig. 34. Top view of the decoy duck

shown at A, Figure 30. The procedure is the same as that used for whittling out the funny duck. Figure 34 shows how the duck looks from above before being painted and Figure 35 gives a color key to painting it.

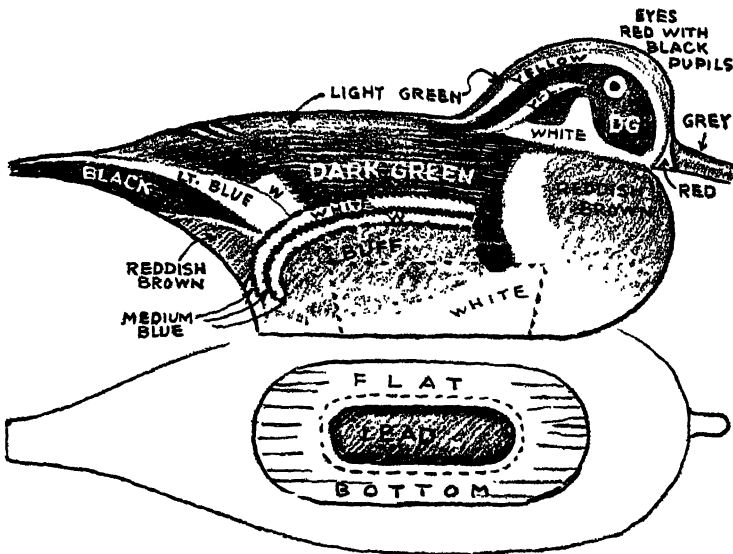


Fig. 35. Color key for painting the duck

PENGUINS

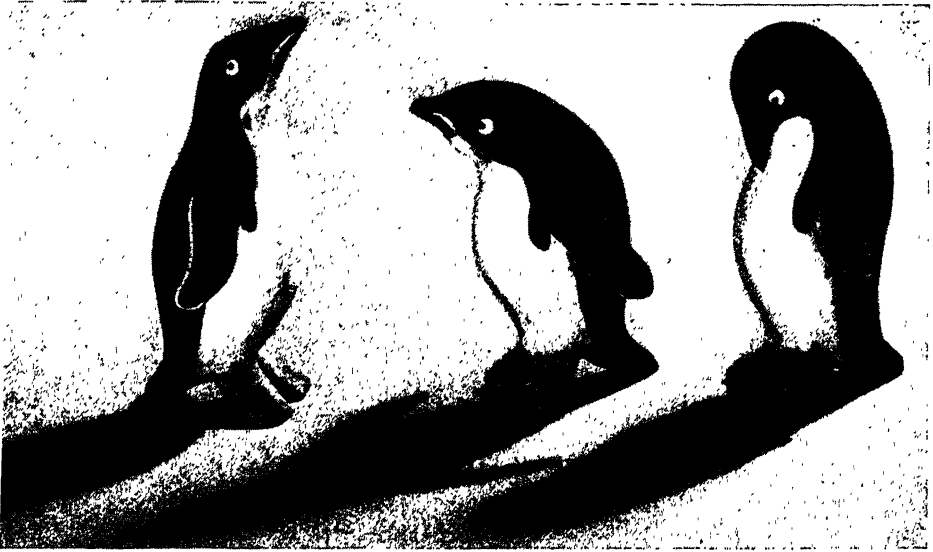


Fig. 36

And now for some funny, manlike penguins. A set of them makes an attractive group for a window shelf or a whatnot. They are quite simple to whittle and to paint. The first operation of course is to draw or trace the silhouette outlines onto a block of softwood and saw them out. The drawings shown in Figures 38, 39, and 40 are full size and can be traced. Figure 37 shows how the penguin shown in Figure 39 is to be blocked out. The other two are blocked or roughed out in the same manner excepting that the wings are not extended. After roughing out, begin to round up being careful not to break off the beaks or toes. If this should happen glue or cement the broken piece on at once, and set it aside to dry thoroughly while you work on another project. After awhile whittle the broken part and it will not show. Whittling is somewhat like sculpturing in stone. What's taken off, stays off. But in working with wood, a broken or cracked section can easily be glued back in place and worked on again.

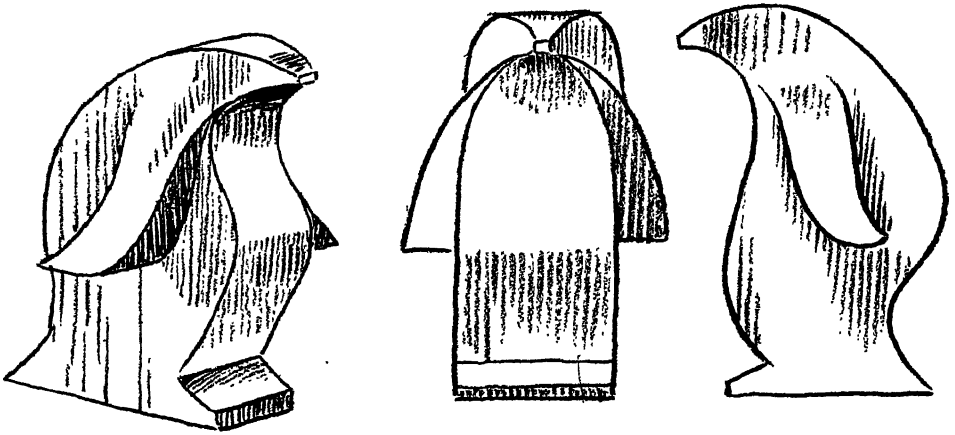


Fig. 37. Blocked out stage

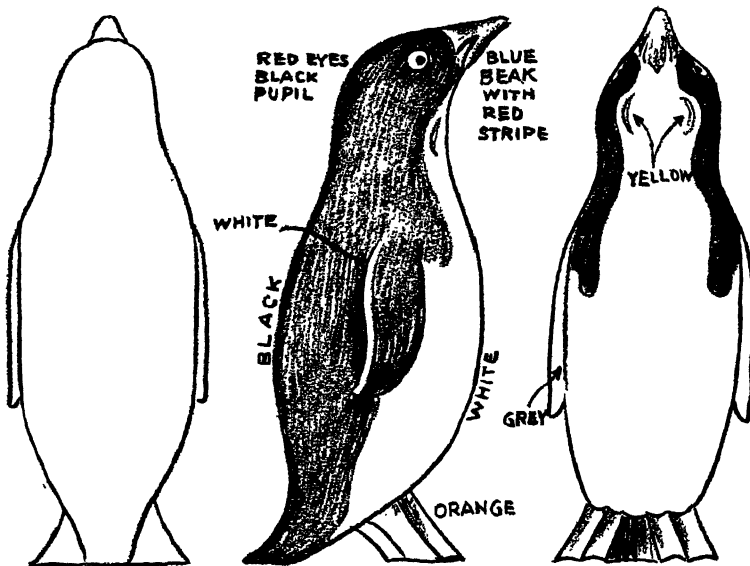


Fig. 38. Color key

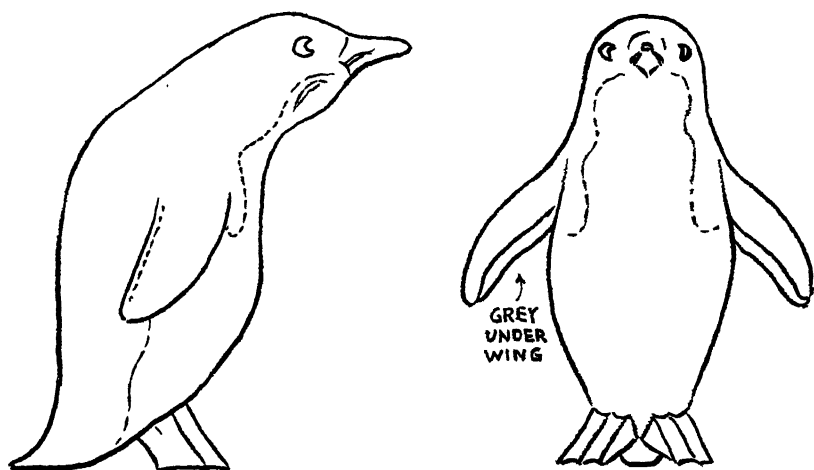


Fig. 39. Side and front views

Figure 38 shows the color scheme. The penguins, in Figures 39 and 40, are marked off to indicate the different areas to be painted. Color the backs black, breasts white, and the feet a yellowish orange. Paint the beak a dark blue (not too dark), with red stripes running down the sides, and two yellow spots as indicated on the neck below the beak. Color the eyes red with pupils black. The finished birds are shown in Figure 36.

To give the birds a porcelain appearance, apply three or four coats of clear fingernail polish or lacquer. Allow each coat to dry thoroughly before applying the next.

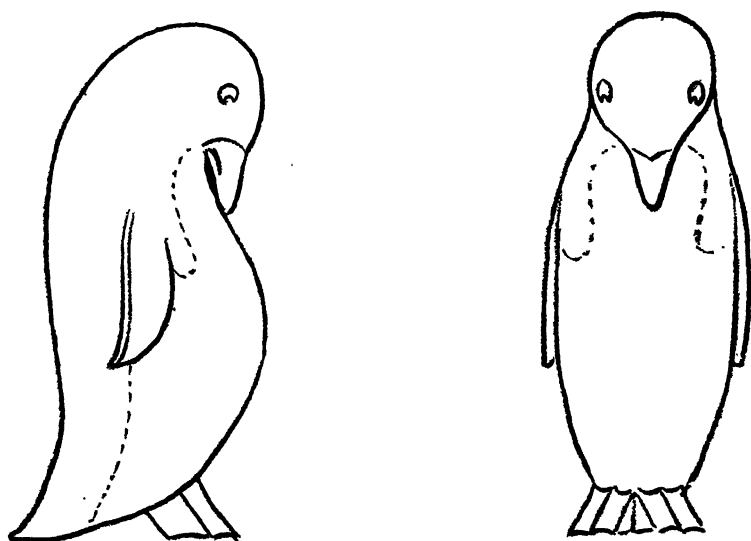


Fig. 40. Side and front views

WOODEN JEWELRY

Almost all present-day jewelry is very attractive and certainly there seems to be quite a demand for it. Since the same pieces are reproduced in such enormous quantities, duplicates are frequently seen. When this type of jewelry is designed by an individual and then made by hand, repetitions are rather scarce. The articles described and illustrated in the following pages are of Indian design, and, if well made, they will attract a great deal of attention. Original designs may be developed that will be just as attractive.

The first thing to do is to study how the different units are constructed.

Girls, as well as boys, can whittle these ornaments. Woods can be treated to match any dress, not only in design, but also in color. Water-color paints and a coat of clear fingernail polish or lacquer are all that is needed for finishing. If the knife is very sharp, the whittling is simple.

LAPEL PINS AND BROOCHES

The simplest way to fasten these pins and brooches to the coat or dress is with a common safety pin, the size depending upon the ornament. In A, Figure 41, is shown how the notch or groove is to be cut into the back. The safety pin should fit snugly and be set into the wood a little less than halfway (see B, Fig. 41). After it has been fitted, remove the pin from the groove, fill it with liquid or aluminum solder. Press the pin down into the groove, and if necessary add a little more solder to fill it level with the surface. Then let it dry. Plastic wood may be used in the same manner.

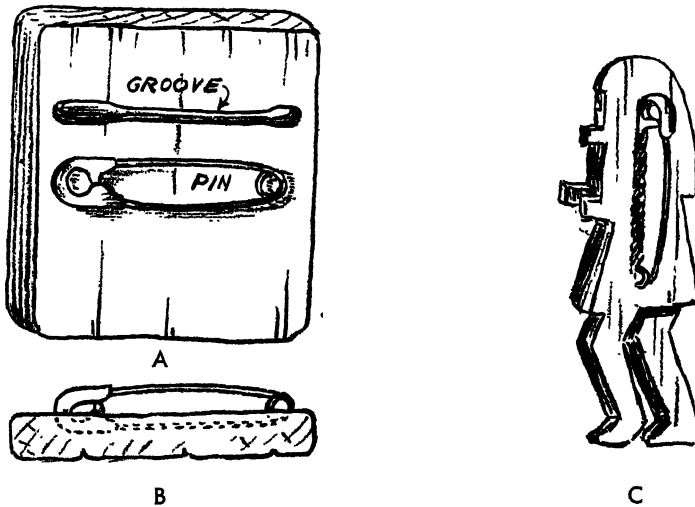


Fig. 41. A, Attaching the safety pin to the block; B, setting the pin into the groove; C, fastening pin in a long design

For long designs, such as totem poles and katchina dolls, the pins should run up and down as shown in C, Figure 41. If a clasp fastening is wanted, buy a cheap clasp brooch at the dime store, remove the clasp and fasten it to the back of the brooch with aluminum solder. Exact directions cannot be given because of the many different varieties of clasps on the market.

BELTS, NECKLACES, AND BRACELETS

This kind of jewelry is simple to fasten, as it is usually held together with a cord for which holes must be drilled through the blanks with a 1/16-in. twist drill. Make the hole as close to the back or rear as possible without splitting the wood. For this reason, the practical thing to do is to drill the holes into the blanks before starting to whittle. The blanks, or units, should be $\frac{1}{4}$ in. thick.

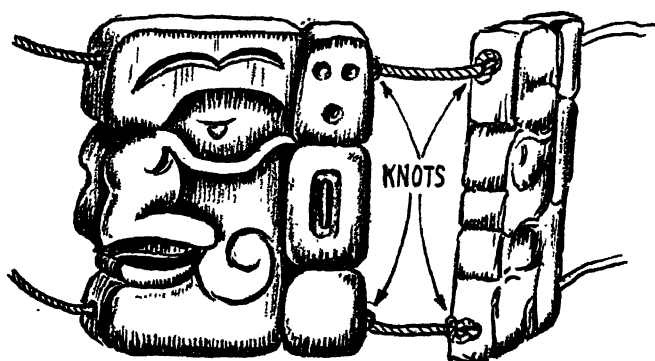


Fig. 42

Figure 42 shows how belts and bracelets are drilled and strung. Necklaces, of course, need only be drilled at the top, as shown in Figure 43. The cord may be knotted or the various pieces may be spaced with beads. For bracelets, use round or cord elastic, so that they may be slipped over the hand.



Fig. 43. The necklace

ZIPPER PULLS AND NECKLACES

Zipper pulls and necklaces may have a piece of the wood left standing for an eyelet, as shown in A, Figure 44, at the left, and in Figure 60, page 44, or a small screw eye may be inserted into the top of the figure as shown in the katchina doll to the right in B, Figure 44. A zipper pull should have a flat back, so only carve out the front half of the katchina.

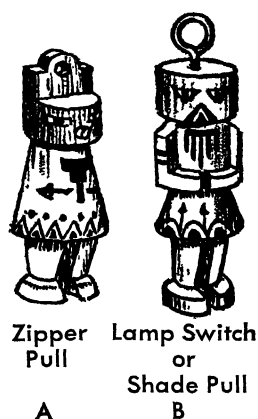


Fig. 44

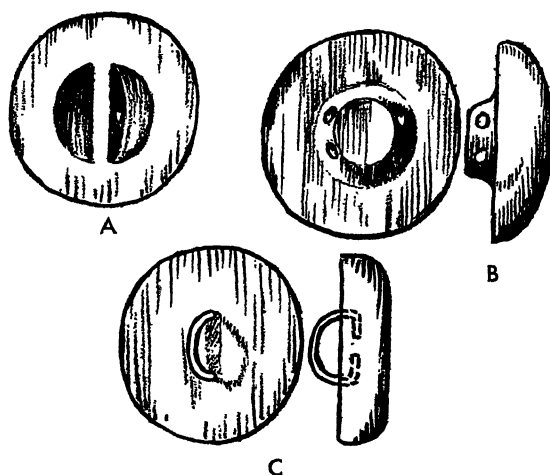


Fig. 45

BUTTONS

Buttons are fastened by anyone of the methods shown in Figure 45. The method shown in A, Figure 45, has a depression whittled into the back. This button must be tied onto the garment. The back of the button may also be whittled as shown at B, Figure 45, so that it may be sewed in place. Another method is shown in C, Figure 45, where a small D ring is set into the back and fastened with liquid solder as described for the lapel pins and brooches, page 33.

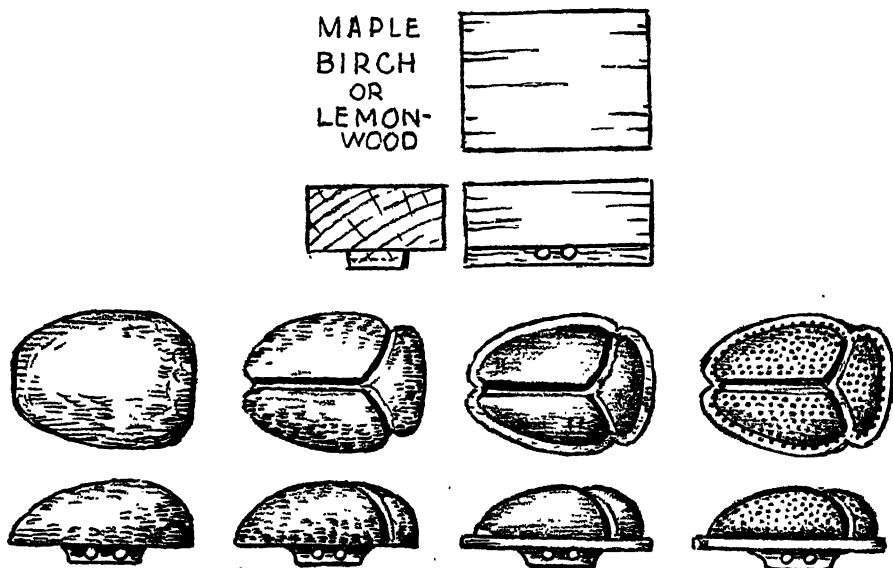


Fig. 46. Full-size patterns for the beetle button

In Figures 46 and 47 are shown the steps required to whittle beetle or scarab buttons. As they are rather small, it would probably be better if they were made of some harder wood than is ordinarily used for whittling. Birch, maple, or lemonwood are easy to whittle, for these woods have very little grain. Many kinds of beetles are very colorful and have interesting shapes. They may be found in books on insects. The one shown here has a bright metallic green back and the edge is a metallic red. The little dots are made with a blunt end of an awl after the beetle is sanded and before it is painted. A small amount of aluminum powder may be mixed with the water colors to get the desired metallic finish, and one coat of clear nail polish for the final finish. These buttons were made to be fastened through buttonholes. Where the buttons are only used for ornament, the beetles may be made larger and more elaborate with feelers and legs.

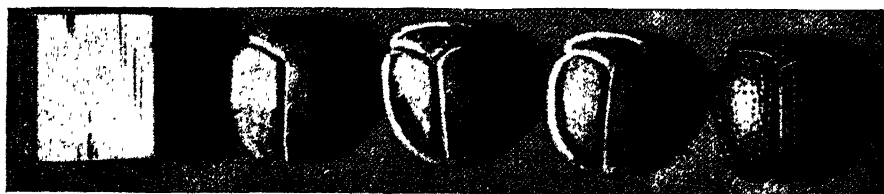


Fig. 47. Succession steps in the carving of a button

MAYAN DESIGNS

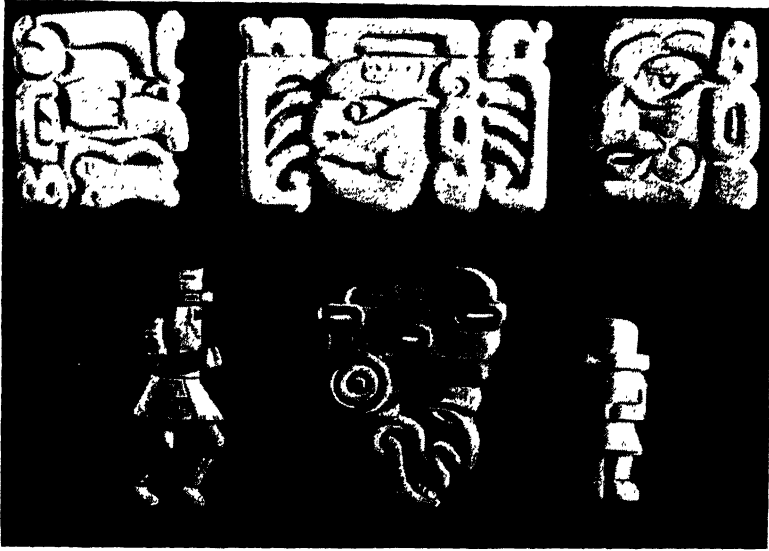
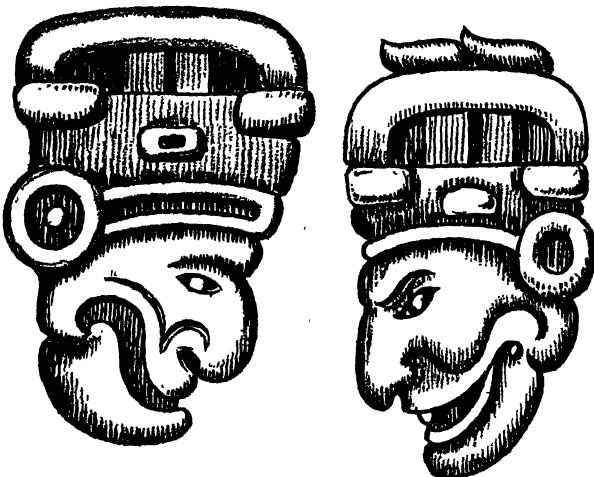


Fig. 48. Jewelry

The bracelet and necklace designs shown in Figures 42, 43, 48, and 49 are taken from Mayan Codices. They are calendar numerals or parts thereof. These designs are unusual and are very attractive. Figure 49 shows



two that are quite outstanding when worn as brooches. Sand paper them carefully after they are whittled and paint them. They should be painted in bright colors or in shades of terra cotta to resemble stone. The face should always be Indian red regardless of how the rest is colored.

Fig. 49. Designs for brooches and pins

ORNAMENTAL BROOCHES

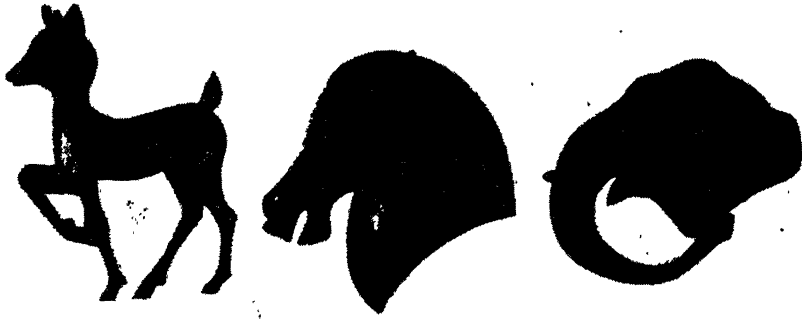


Fig. 50. These brooches were made of some very old cherrywood which had become quite dark with age. They were finished with wax only

Any one of the three attractive pins shown in Figure 50 can be made in an evening. The drawings shown in Figure 51 are full size so that they may be traced and transferred to the wood with carbon paper. A softwood may be used for these pins if so desired. If some harder wood, such as red cedar, cherry, or gumwood is used, a smoother job will result, since the brooches are to be finished in the natural wood, or with probably a little stain to bring out the quality or grain of the wood.

Hardwood is, in this case, better than softwood, because it is not so likely to split. The wood should be $\frac{1}{4}$ or $\frac{5}{16}$ in. thick. After the outline has been transferred to the wood, cut it out with a coping, jeweler's, or power jig saw. Study the half tones and the drawings. Remember that only one half of the animal is made; that means that all forward edges are rounded off. In other words, the finished job will not show any signs of the saw cuts, with the exception of the bottom of the hoofs or feet of the deer. The slant cut across the bottom of the horsehead pin also shows how the edges are rounded off. Finish with sandpaper.

Fasten the safety pins to the backs. Give the face a few coats of furniture wax and polish it. Perhaps a coat or two of varnish, shellac, nail polish, or

clear lacquer may be applied. The polishing may be done on a felt or muslin polishing wheel. If mahogany is used, a coat of filler is necessary as the pores are quite noticeable on such small objects.

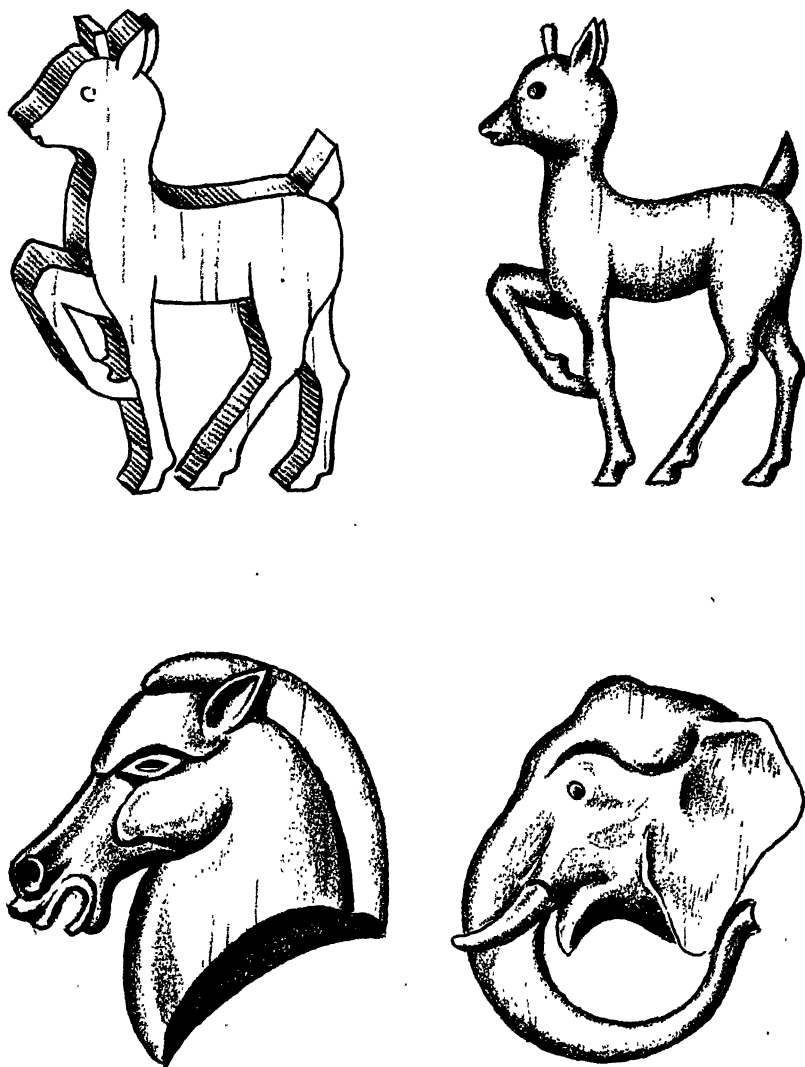


Fig. 51. Full-size patterns for brooches

KATCINA DOLLS



Fig. 52. All painted up!

It may not be amiss, at this stage, to take up some Indian lore about kachina dolls, and then whittle a few of them. These dolls are images made to represent the mythical spirit people of the Hopi Indians, believed to inhabit San Francisco Mountain. According to the Indians, these spirits visit the pueblos at certain seasons. The kachina dolls are made by the Hopi men and are presented to the little girls at the various kachina ceremonies. There are more than 300 different kachinas.

Any of the softwoods may be used for whittling these dolls. The Hopis usually used cottonwood roots, but the grain is quite rough and stringy, and they are more difficult to paint than regular softwood. Some of the older dolls were dressed in buckskin or cloth skirts. However, at the present time they are decorated with various colors of paints and feathers. Four kachina dolls are shown in Figure 52 completed with water colors and feathers. Figure 53 shows three kachina dolls ready for paint.

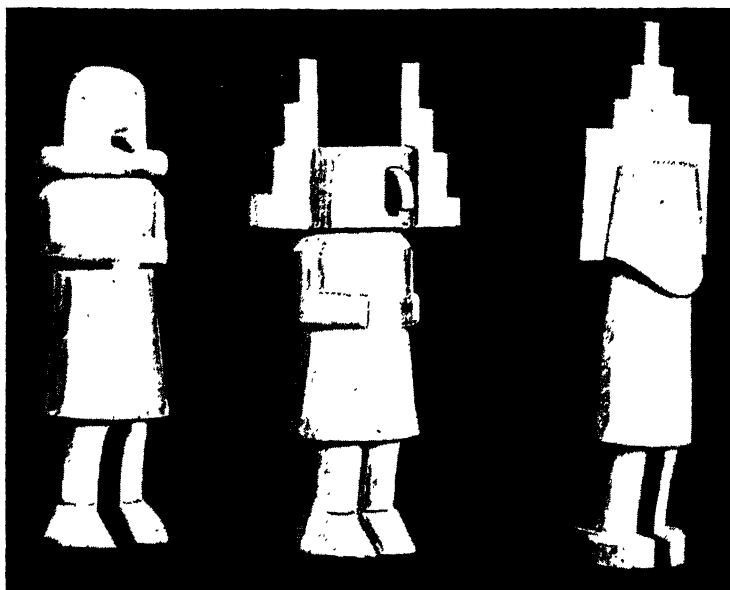


Fig. 53. Ready for the paint and feathers

Figure 54 shows how the wood is marked off, the saw cut for the legs, and the finished whittling of one type of doll. No faces are whittled as most of the katsina dancers, whom these dolls represent, wore masks. The ornamental top panels at the side of the masks are glued into slots (see Fig. 55). The noses shown in Figure 56 are set into mortises in the same

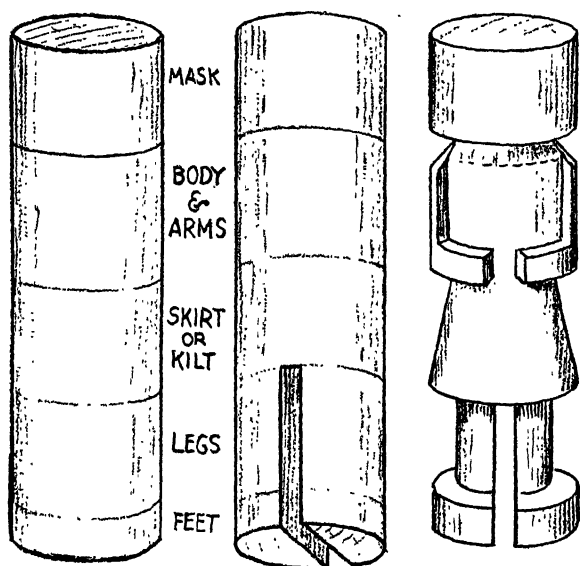


Fig. 54. Katsina doll proportions

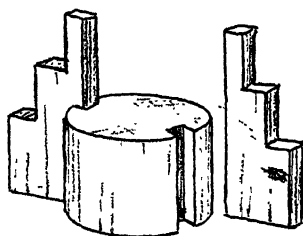


Fig. 55. The headpiece

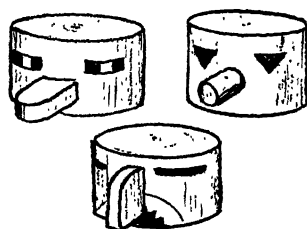


Fig. 56. Noses

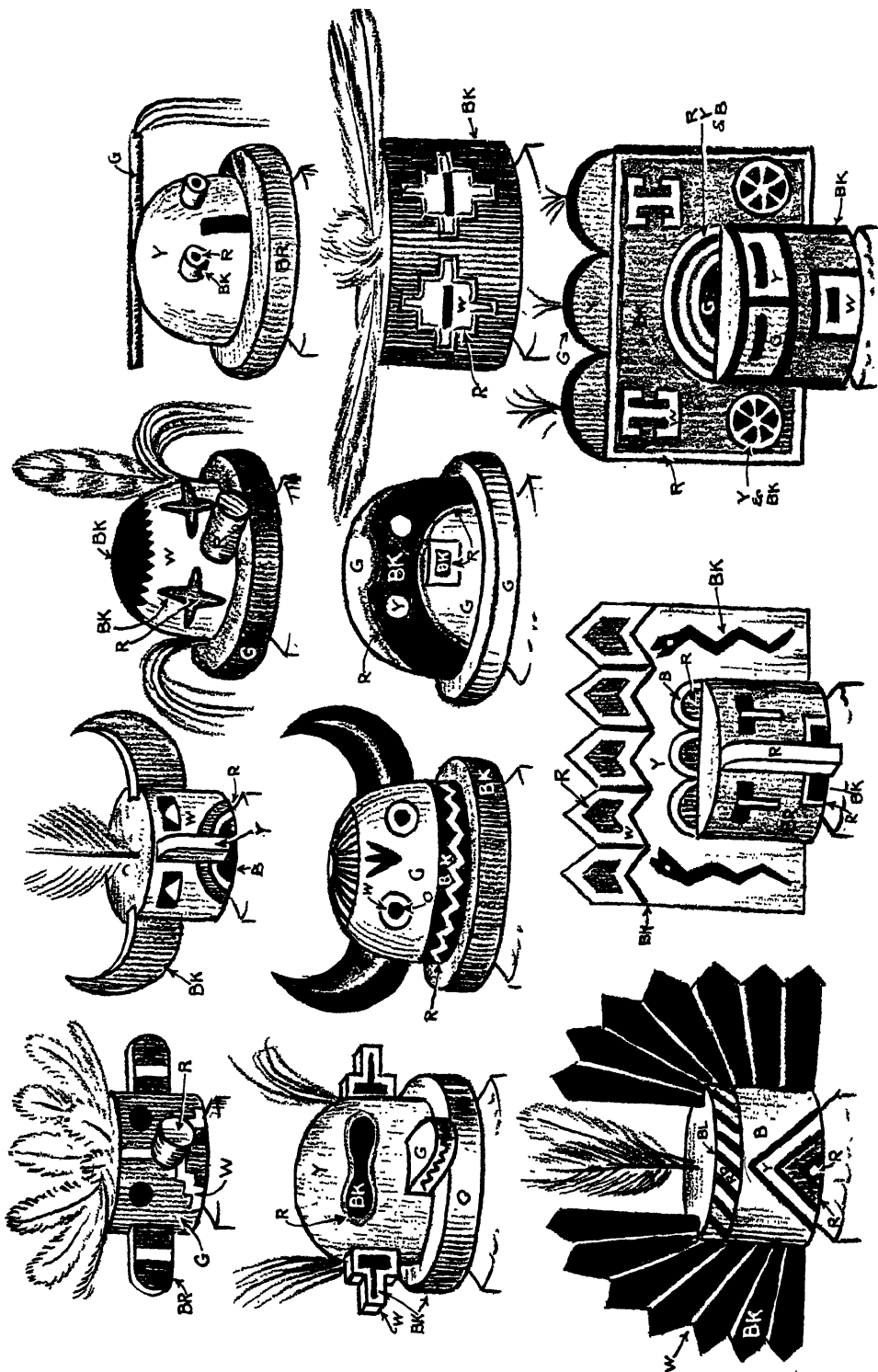




Fig. 58. For color key see Fig. 57

manner. Figure 57 shows that not all masks have noses and that there are several characteristic masks of the more ornamental type. Notice how the features are represented by using symbolic figures and just a few lines. Some of the dolls are decorated with feathers, others are not.

Three styles of legs and two different kinds of feet are shown in Figure 58. The legs in the upper left-hand corner are whittled without

RAIN CLOUDS

FEATHERS

SUN FLOWERS

SQUASH BLOSSOM

SPROUTING SQUASH SEED

EAGLE OR HAWK

STAR

SNAKE

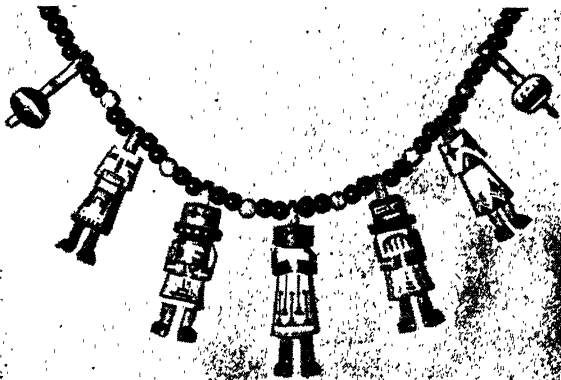
BIRD TRACKS

CORN

SUN

made as large as 3 in. in diameter and 12 in. high. The legs, too, may be made longer or shorter and likewise the skirt. Study the key to the colors shown in Figure 57. It is well also to look at the kachina dolls when visiting a museum. Figure 59 explains the meanings of some Pueblo symbols used in decorating these dolls.

Anyone interested in Indian lore may want to go a little further and whittle a katchina dancing doll. The drawings in Figures 61 and 62 illustrate how to whittle the dolls to show action. The arms are fastened on with a small brad and glue and the rattles and other articles may be added. These can be made in groups for table-top decoration, showing almost



44

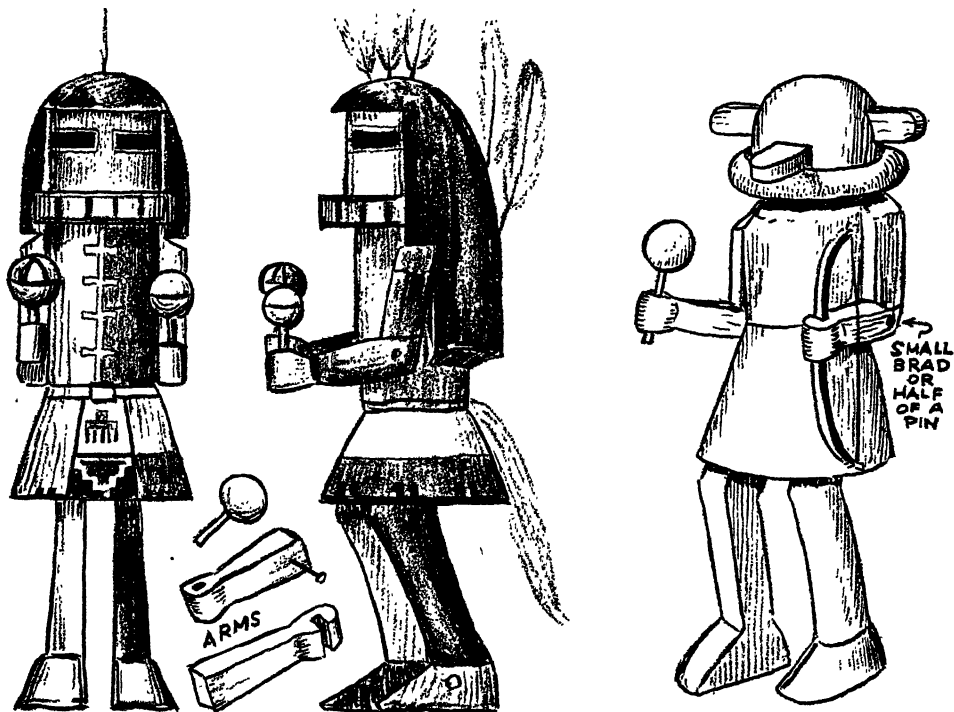


Fig. 61. Kachina dolls showing action

any one of the dances of the Hopi or the Zuni. These dolls are not of Indian origin, but just a thought on the author's part for something a little different. The two shown here represent Hote and Angokchina. Books on ethnology dealing with New Mexico and the Southwest will show other dancers if one may wish to make them.

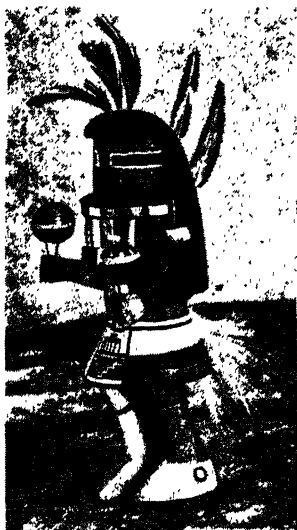


Fig. 62. Kachina dancing doll and table lamp

NECKERCHIEF SLIDES

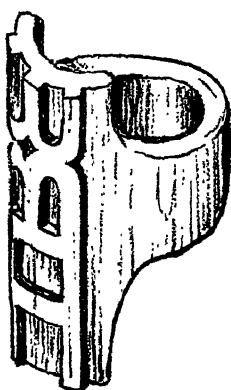
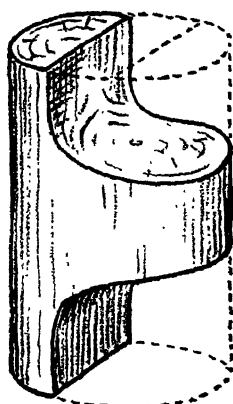
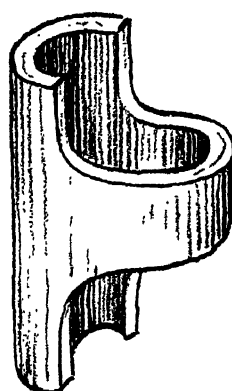


Fig. 63
Neckerchief slide



A
Fig. 64. Full-size pattern and the blocking
out for a neckerchief slide



B

Neckerchief slides are always interesting whittling projects that are very useful. The little pieces of wood required to make them can easily be carried in the pocket and whittled at during moments of leisure. Campers and scouts can work out many ideas besides the ones in these illustrations. While some of the designs shown in Figures 63, 66, and 68 may require a little ingenuity, the whittler should not be afraid to attempt them. The wood costs practically nothing, and the results are usually quite gratifying. White pine or basswood is the easiest to whittle. Basswood saplings, partially seasoned, is also suggested for this work. The whittling knife should be razor sharp. This prevents slipping, insures a neat job, and enables one to do quite a bit of cross-grained and angle cutting. Most of the work on these small objects is done with the small blade and it should be kept very sharp. The simplest kind of slide is the one with an incised monogram or symbol raised on its face (see Fig. 63). The one shown may be whittled out of a piece of $1\frac{1}{2}$ or $1\frac{3}{4}$ -in. sapling (when peeled), or any softwood of the same diameter. First rough out the block as shown in A, Figure 64. Then cut out the opening for the slide, leaving about a $\frac{1}{8}$ -in. wall for the ring (see B, Fig. 64). Lay out the design with a pencil and cut down about $1/16$ in. Pick out the waste. Initials, monograms, symbols, and other designs may be easily whittled in this flat relief style.

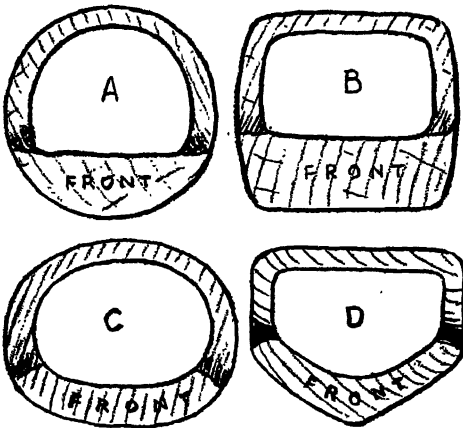


Fig. 65. Various shapes for the hole in the ring

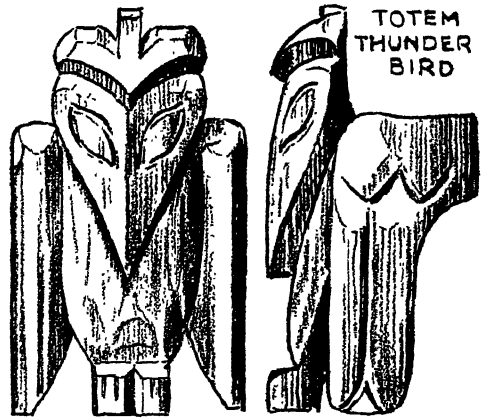


Fig. 66. Totem thunderbird

To make something more interesting, try some of the other neckerchief-slide designs. All of the sketches are full size, and measurements can be taken directly from them. Proportions vary, although the opening in the ring should be large enough to accommodate the neckerchief. If the hole is too large, the slide may slip off too easily and be lost. If, on the other hand, the hole is too small, the ring is very likely to split.

The hole in the ring, or rather the ring proper, need not necessarily be round. Various shapes are shown at A, B, C, and D, in Figure 65. The ones shown at A and B leave the part for the front in one solid piece, while C and D show the back of the front whittled out also. In whittling the thunderbird, shown in Figure 66, the back of the bird is hollowed out as shown in Figure 67.

After finishing any of these neckerchief slides, they may be painted with water colors and protected with a coat or two of white shellac or varnish, or they may be painted with enamels. The thunderbird looks more attractive if it is painted. Expression can be put in the eyes and feathers may be painted on the breast. Figure 67 shows the knife cuts before the final finishing.

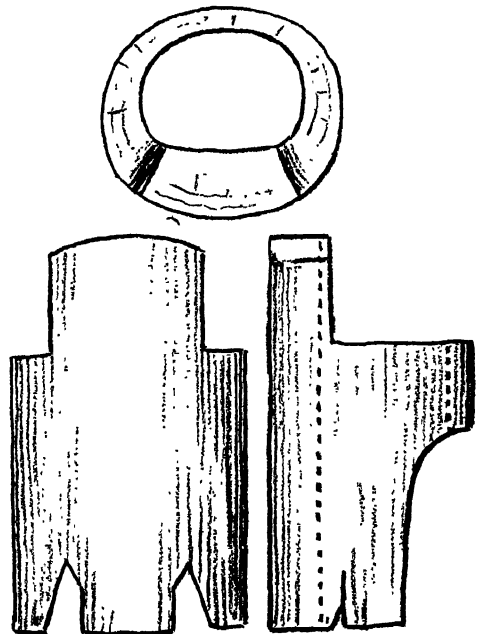


Fig. 67. Pattern for the thunderbird

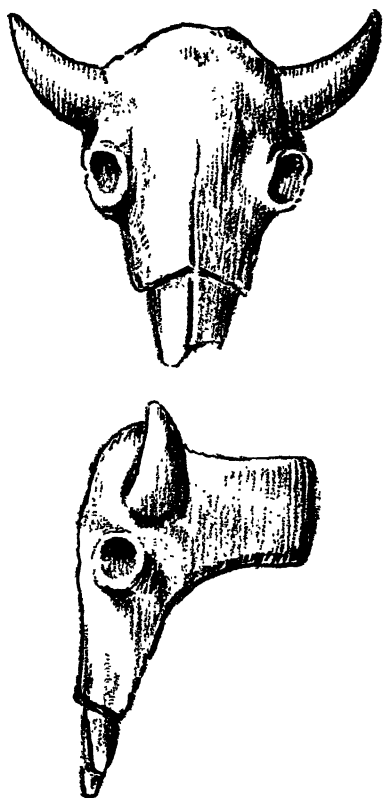


Fig. 68. Front and side views of the buffalo skull

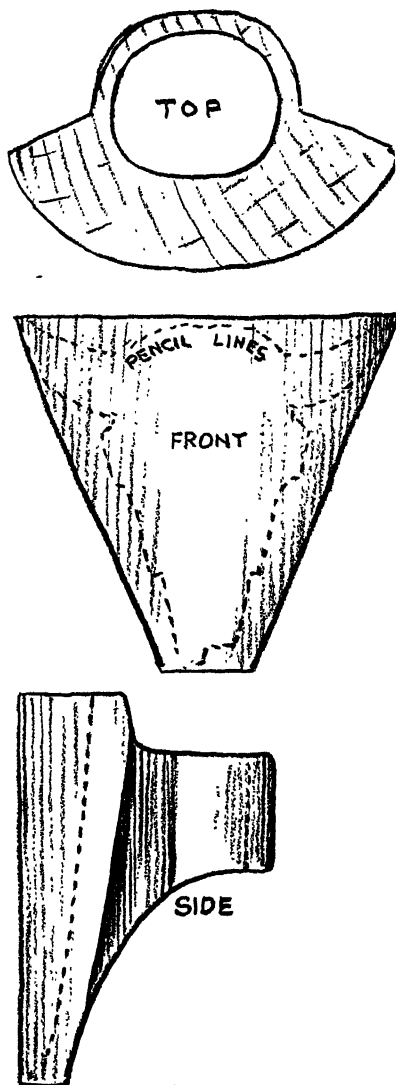


Fig. 69. Full-size pattern for the buffalo skull

The buffalo skull, shown in Figure 68, requires a larger piece of wood. A razor-edged blade is almost necessary to shape the horns. This slide is easier to make than it seems. It is always best to whittle out the ring first. Then if it splits, through careless cutting or a bad piece of wood, not too much is lost. The dotted lines in the side view of Figure 69 show how the inside of the skull is hollowed out. While knife marks are frequently left on some whittling jobs, it is sometimes desired to sandpaper others. This is the case with the buffalo skull slide which should be carefully sanded. To make it realistic, paint the horns gray or dark brown, the bone or skull proper an ivory white, and darken the eye sockets. Then give the whole project a coat of dull varnish. Figure 68 shows the buffalo skull before painting.

TOTEM POLES

Totem poles are interesting to most people because almost everyone is acquainted with these peculiar carvings which our north-west Indians place in front of their houses. Each totem pole tells a story, or is symbolic of the family who owns it. They are usually carved out of huge cedar logs with axes, chisels, and adzes.

The ornamental totem poles shown here are only 12 and 13½ in. high. This is a handy size for whittling. They may be made of any size, however, from ornamental pins 2 or 3 in. high to regular totem poles 10 or 20 ft. high. The ornamental totem poles may be made from a square of wood rounded off on the front, or from a softwood sapling flattened off in the back as shown in Figure 70.

The two poles shown in Figures 71 and 72 consist of several units. The totem pole shown in Figure 71 is symbolic of the raven and the wolf. These ornamental poles can be painted if desired. White, black, red, brown, blue, green, and yellow are the colors usually used, but much of the beauty of the whittling is lost when it is covered with paint. If the poles are simply tinted a brownish gray resembling old weathered totems, they will appear realistic and the whittling will

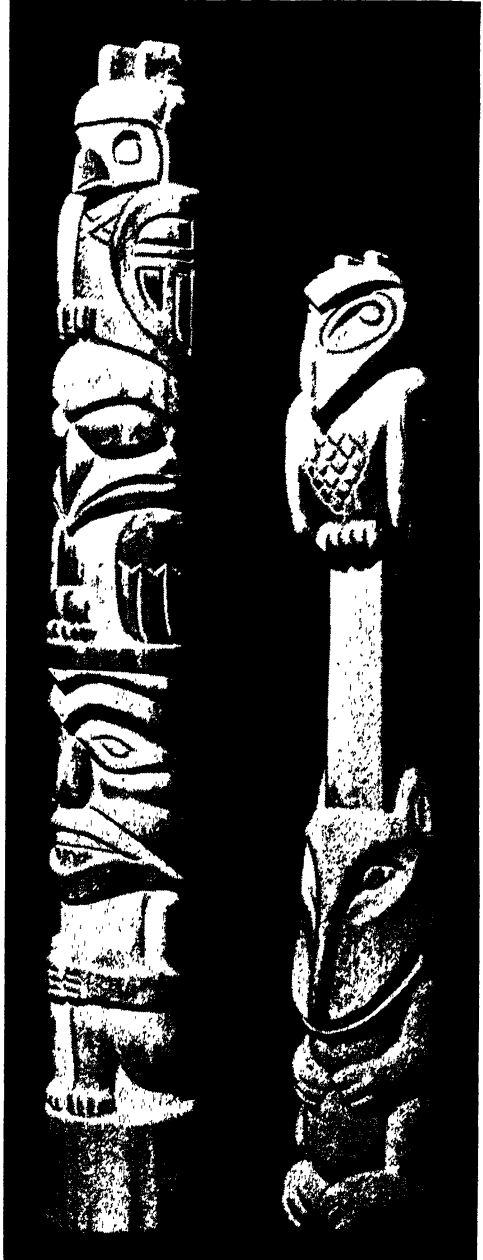


Fig. 73. Totem poles

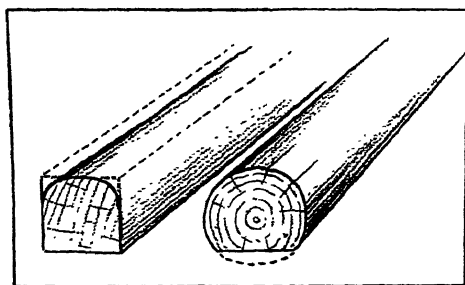


Fig. 70

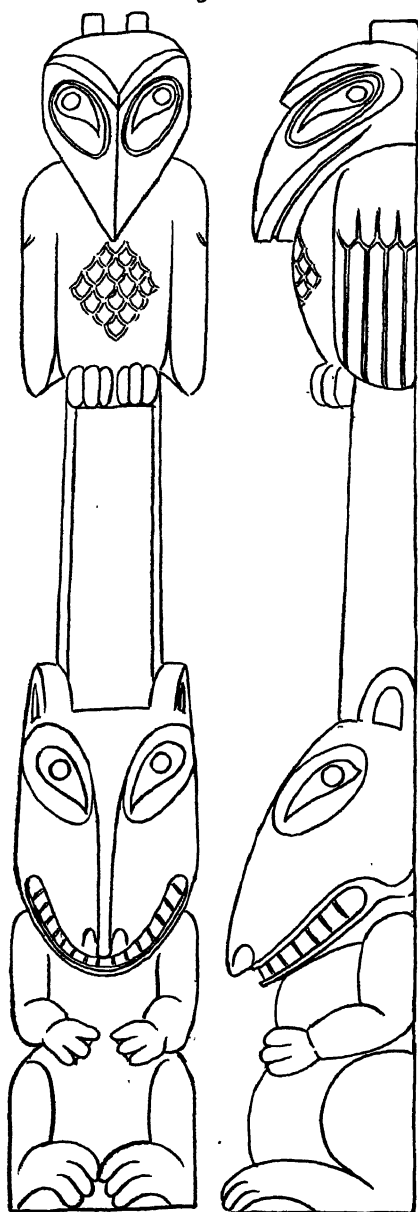


Fig. 71. The raven and the wolf totem poles

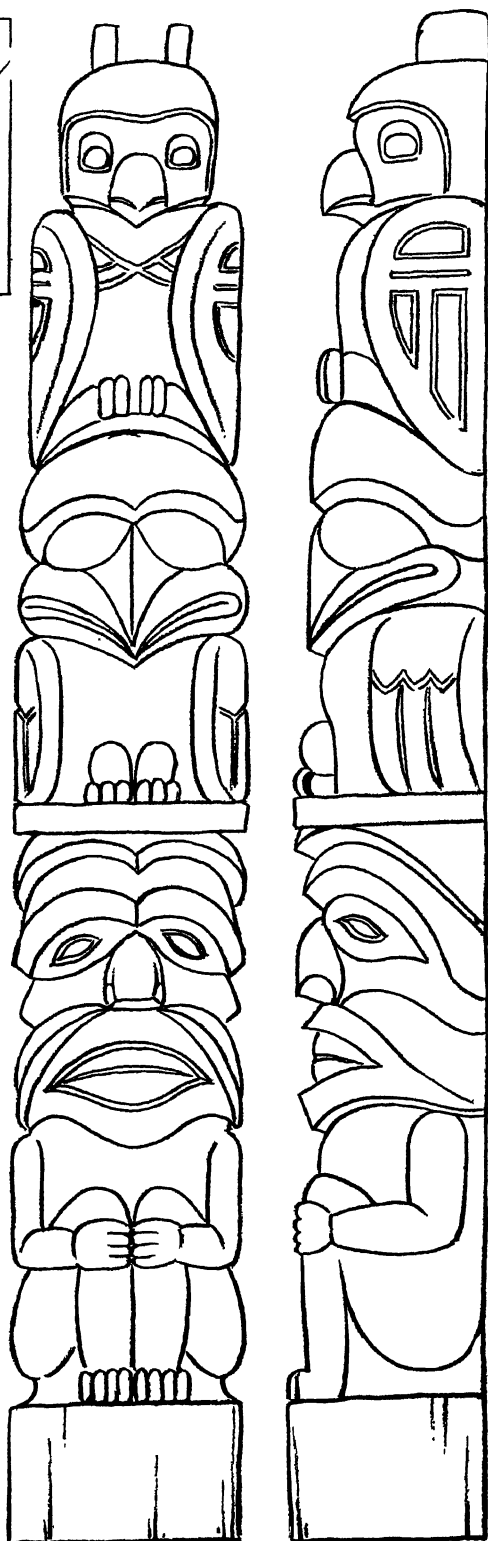


Fig. 72. A miniature totem pole

show up better. A square or round base may be nailed to the bottom of the totems to make them more stable.

Lay out the largest units or parts with a pencil and start by roughing out each one. Then draw the details with the pencil. The shading has been omitted in the drawings to avoid confusion. Study the illustrations in Figure 73 to get the various planes, as they were left unpainted for this purpose.

MARQUESAS ISLAND STILT STEPS

After whittling and studying totem poles from Alaska, the whittler is asked to take a long jump to the Marquesas Islands in the South Seas. From among the many different things these South Sea Islanders whittle, the ornamental stilt steps shown in Figures 74 and 75 were chosen. The back is slightly hollowed to fit the pole to which it is firmly lashed, thus making it possible to change the height of the steps.

These stilt steps at once suggest two uses, namely, coat hooks and shelf brackets. Figure 74 shows the stilt steps as used for coat hooks and Figure 75 shows one end of a shelf which is supported by two of these brackets. Stilt steps can be whittled from $\frac{3}{4}$ -, $\frac{1}{2}$ -, or 1-in. pieces of board. Figure 76 may be used as a full-size pattern. To make them substantial, birch or mahogany may be used, but mahogany is the easiest of the two to whittle. The back of the step should be left flat. It can be fastened to the wall with two finishing nails as shown. To prevent splitting, drill the pilot holes slightly larger than the nails.



Fig. 74. Marquesas Island stilt step

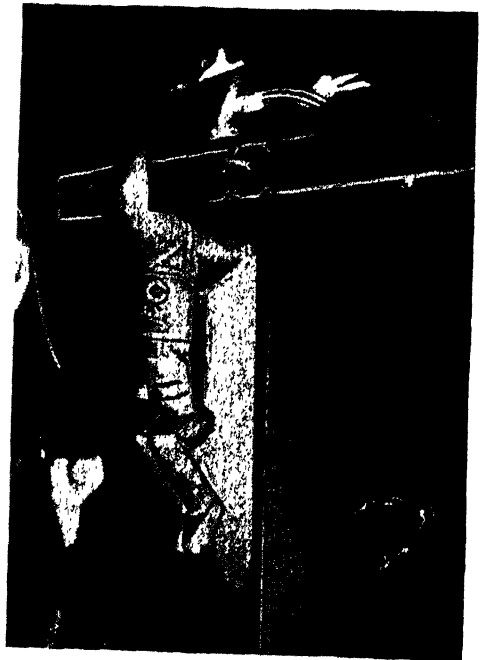


Fig. 75. The stilt step converted into a shelf bracket

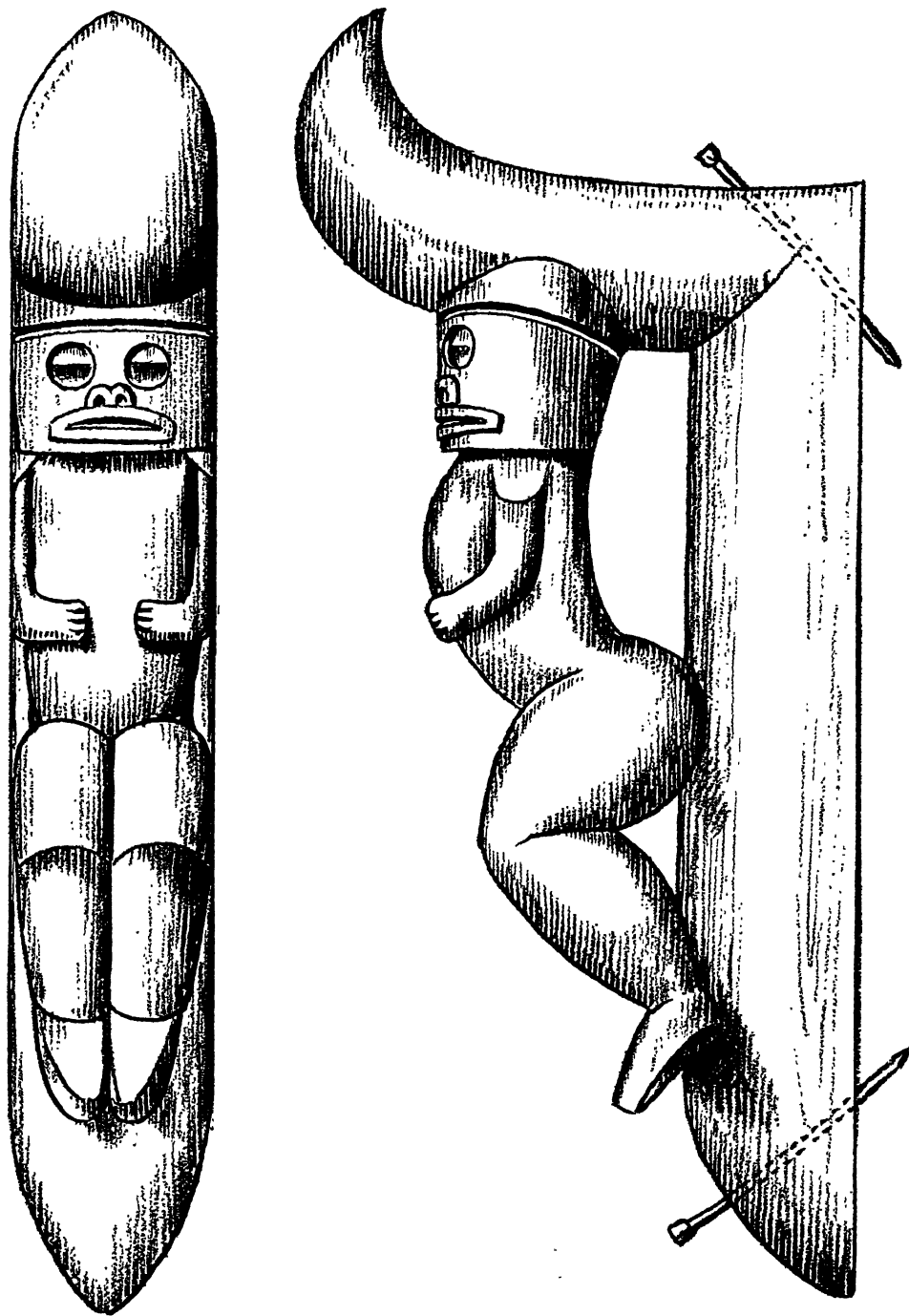


Fig. 76. Full-size pattern for transforming the Marquesas Island stilt step into a coat hook

TURTLE PAPERWEIGHT



Fig. 77. Sanded turtle above. The turtle with its final decoration below

This paperweight is known in its natural home surroundings as the painted box turtle.

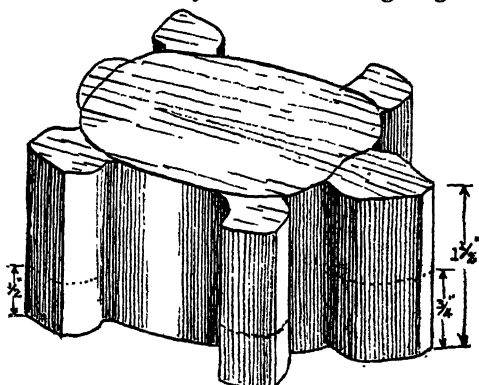
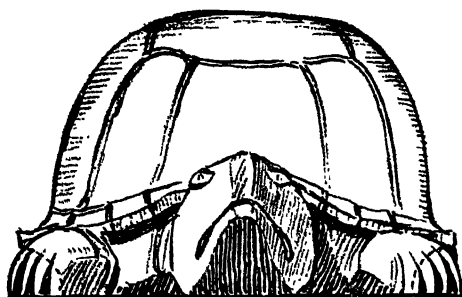
The first step is to mark the top view of the turtle as shown at the upper right in Figure 78 on a piece of $1\frac{1}{2}$ by $2\frac{3}{4}$ by 4-in. white pine or any other suitable wood. Place it so that the grain of the wood runs lengthwise. Then saw out the silhouette as shown.

The next step is to cut straight down along the edge of the shell to the heights given for the legs, feet, and tail, as shown at the upper right, Figure 78. Round up the shell, and use $\frac{1}{8}$ -in. V cuts to outline the shell sections. After finishing up the head and feet, sand up the whole piece

carefully. Then bore holes in the bottom and fill them with lead or babbitt metal to give weight to the little reptile.

The painting of the shell has been conventionalized somewhat (see Fig. 77), but the general characteristics have been adhered to. The background color is a deep reddish brown, and the smaller figures in the segments are painted yellow with light brown edges and crosslines to soften up the design. The legs, head, and tail are painted gray with a greenish line running from the nose over the eye, and ending right back of them.

Give the shell a couple coats of clear nail polish for a finish coat.



The silhouette

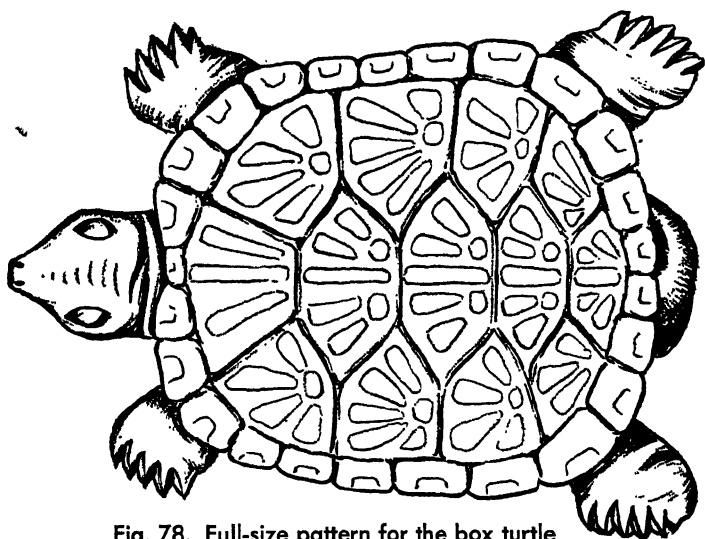
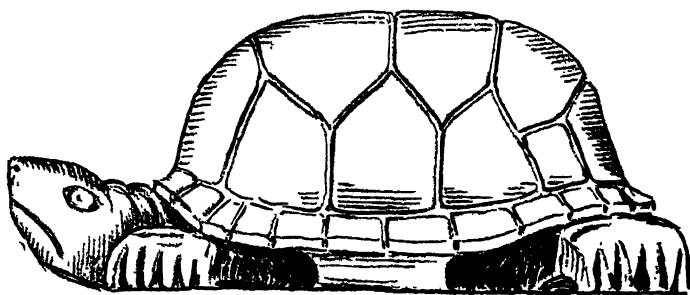


Fig. 78. Full-size pattern for the box turtle

SCARLET IBIS

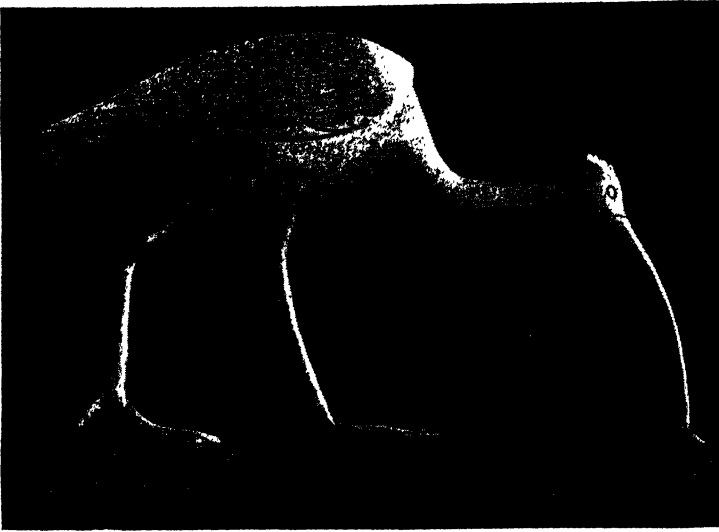


Fig. 79

When first seen, the scarlet ibis shown in Figure 79 looks like a difficult job of whittling. Examination of Figures 80 and 81 will show, however, that it will be no more troublesome than some of the other projects. The one shown was cut from a $1\frac{1}{4}$ -in. block of sugar pine. Trace the outline on the wood and cut it out on a jig saw as shown in Figure 80. Then outline the shape with a pencil and rough out the ibis as shown in Figure 81. When whittling the bill and the legs be careful not to break them because they are quite fragile (see Fig. 81). The actual whittling takes less time than it does to do the jig-saw work. Figure 79 shows the bird after sanding.

The scarlet ibis may be painted a brilliant vermillion, with the feather outlines accentuated in brown and the end wing feathers, eyes, and bill painted black. The legs are light brown and the base is moss green. If objects of this kind are given three or four coats of white shellac, clear lacquer, or varnish, they will look like porcelain.



Fig. 80. Marking off the block

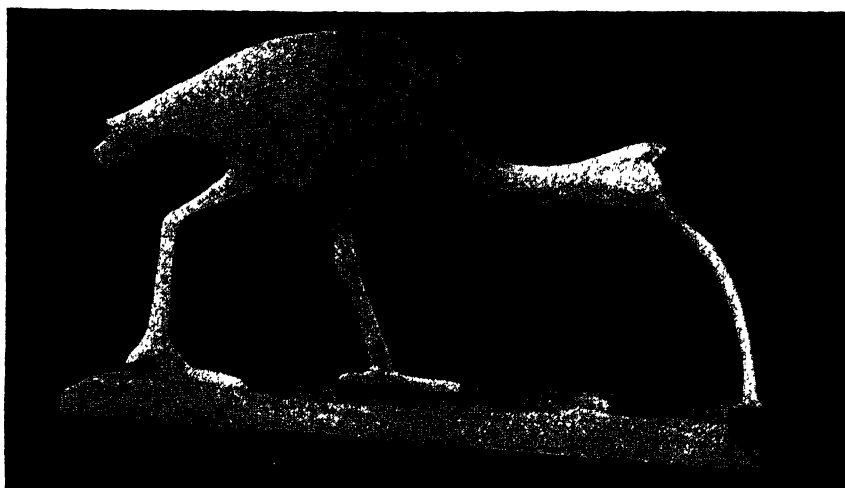


Fig. 81. Roughing out the scarlet ibis

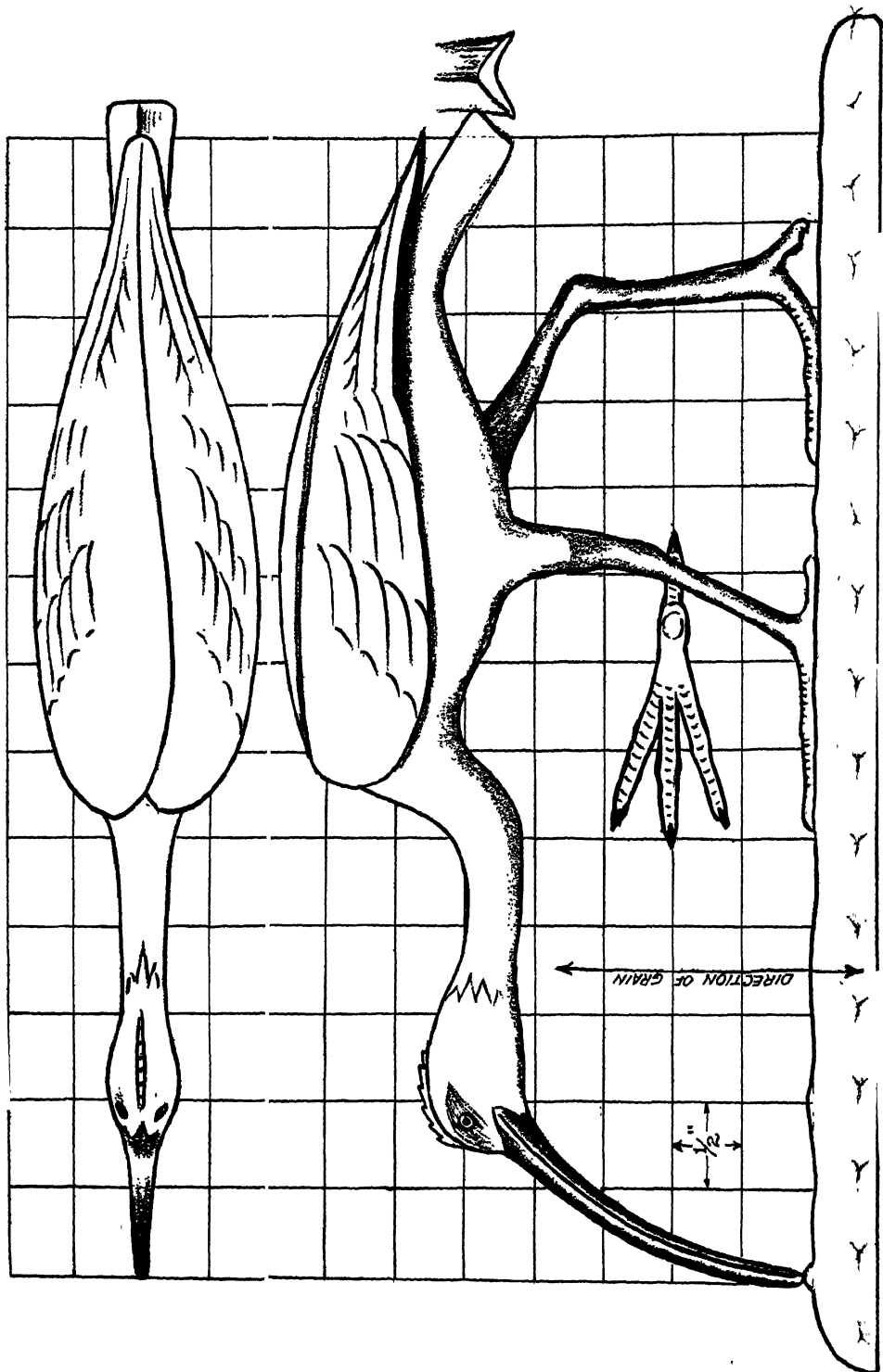


Fig. 82. To enlarge the design mark off the squares, as indicated, on a piece of paper and saw out the pattern

THE PENSIVE PELICAN

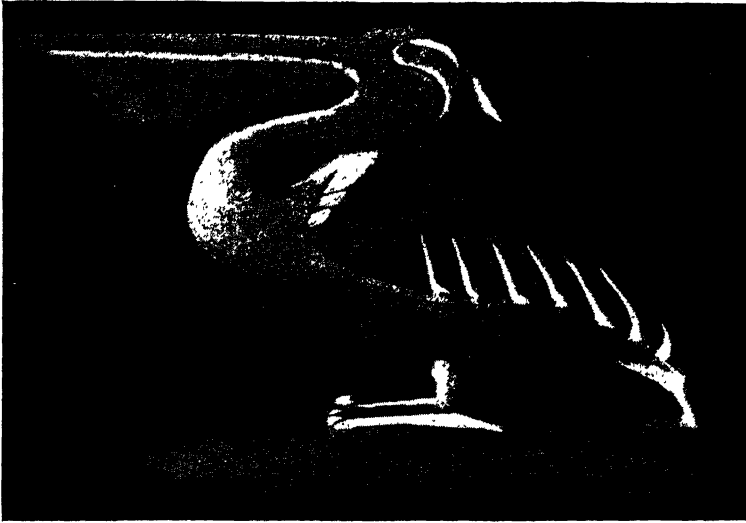


Fig. 83

The pelican in Figure 83 shows another type of whittling, that is, all the knife cuts are left visible. The whittling procedure is identical with that used on the ibis, that is, jig-sawing the silhouette, blocking out, and then doing the final whittling. Figure 84 may be used as a full-size pattern. The whittling must be done carefully, however, as each knife cut must tell a story. If the piece is to be left in the raw wood, it is well to finish it with either a coat of white shellac, dull varnish, or several coats of liquid furniture or floor wax, otherwise it will become soiled very quickly from handling.

It is well to finish these whittled objects in various ways to take away the monotony that results in having all whittled articles look alike when finished. The pelican may be sanded and given several coats of eggshell ivory enamel to make it really attractive.

A table ornament may be made with several pelicans used as a dish support as shown in Figure 85. The birds are whittled without the feet and are carefully sanded. The legs are then whittled out of separate pieces and set into two holes drilled in the body of the bird. Holes are also drilled

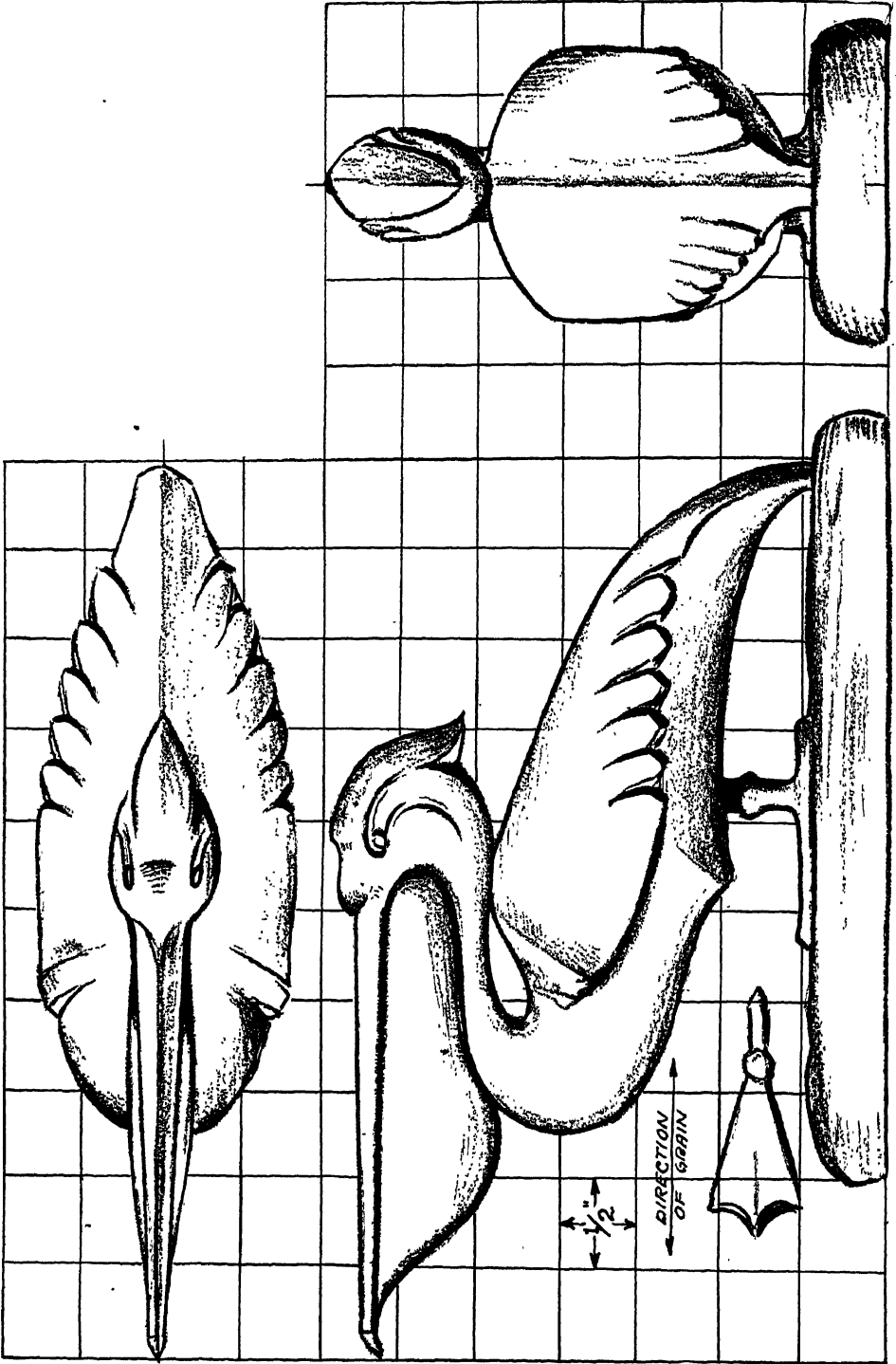


Fig. 84. Layout for the pelican

into the wooden circular base. The feet are then cut into the base as shown in Figure 85, which also shows three views of the bird. The birds and base should be finished in ivory eggshell enamel. The bowl may be made of hammered copper to fit the base, or a wooden bowl may be turned on a lathe and painted to match the base.

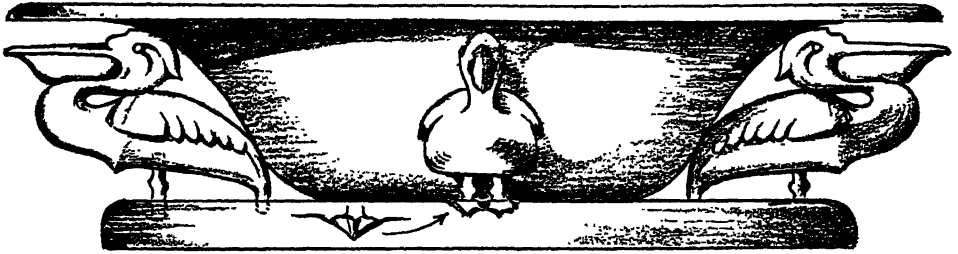


Fig. 85. Table ornament utilizing the pelican design

LOON

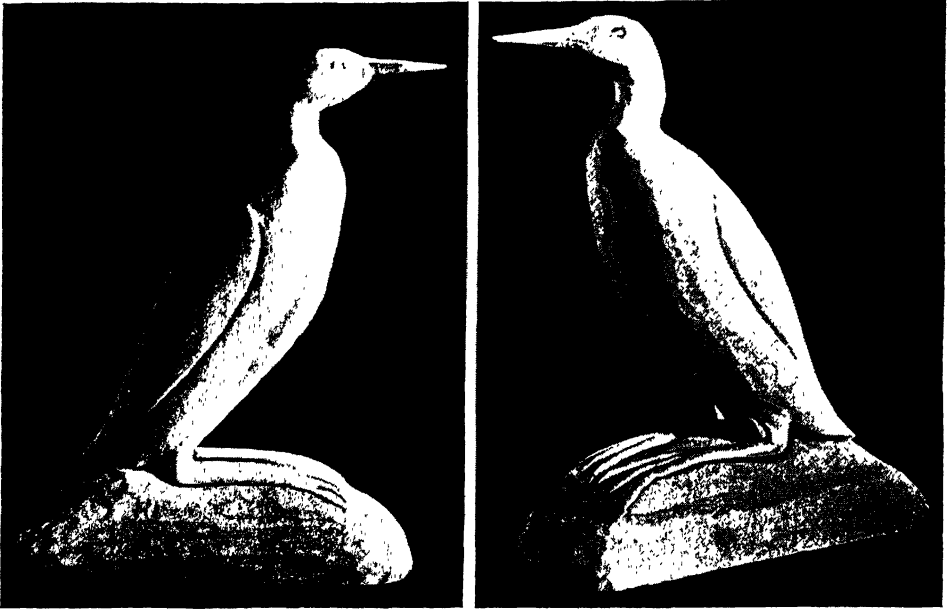


Fig. 86. Finishing the whittling on the loon

The loon shown in Figures 86 and 87 is a very striking bird, which one does not often have the opportunity of viewing at close range. With its simple markings of black and white, its long graceful body and small head, and its awkward feet, it is the champion diver and underwater swimmer. Its weird and lonesome call echoes and re-echoes through the north woods day and night. To see the male loon performing his dance around his mate, seemingly walking, or rather dancing, upon the surface of the water, is a sight which only few have witnessed.

To whittle a loon the size shown in Figure 88, a piece of wood $2\frac{1}{2}$ in. thick, 7 in. wide, and $7\frac{1}{2}$ in. high is required. The extra piece for the sub-base can be any piece of softwood $\frac{3}{4}$ to $\frac{1}{2}$ by 3 by $6\frac{1}{2}$ in. It may be glued on after the whittling is done, to give the bird better stability and to prevent the regular base from chipping or splitting. The grain of the bird and base is vertical while the subbase is horizontal.

Draw the outline on the wood and cut it out with a band or jig saw. Cut the base of the bill as shown in Figure 88. Carefully, so as not to

split the head, drill a $\frac{7}{16}$ - or $\frac{3}{8}$ -in. hole in the center of this crosscut. Then set in a piece of dowel for the bill and secure it with glue or plastic wood. This bill will have the grain running the long way.

Perhaps the most difficult part of the whittling will be the feet and legs. A razor-sharp knife edge will be required. The wings are set quite close to the body, being raised approximately $\frac{1}{16}$ in. The base can be left rough, but the body should be sanded perfectly smooth as this bird is the last word in streamlining. The body should not be perfectly round, but rather flattened slightly in the front and back. Figure 86 shows two views of the loon as the whittling nears completion.

To color the bird, paint the body white and the head and neckbands black. Then paint the markings with black paint on the white as shown in the two views in Figure 87. The author used poster water colors in order to avoid the gloss of oil paint, although, if desired, the latter may be used. The poster colors will dry very much faster than the oil paints.

The markings as shown are more or less conventionalized, but are realistic enough to avoid any criticism. Study Figure 87 carefully. In some cases, such as the sides below the wing, the black is painted over the white and the round dots are then again painted over the black with white paint.

The bill should be painted a dark gray and the eyes red with black pupils. The legs and feet are black and the base a moss green.

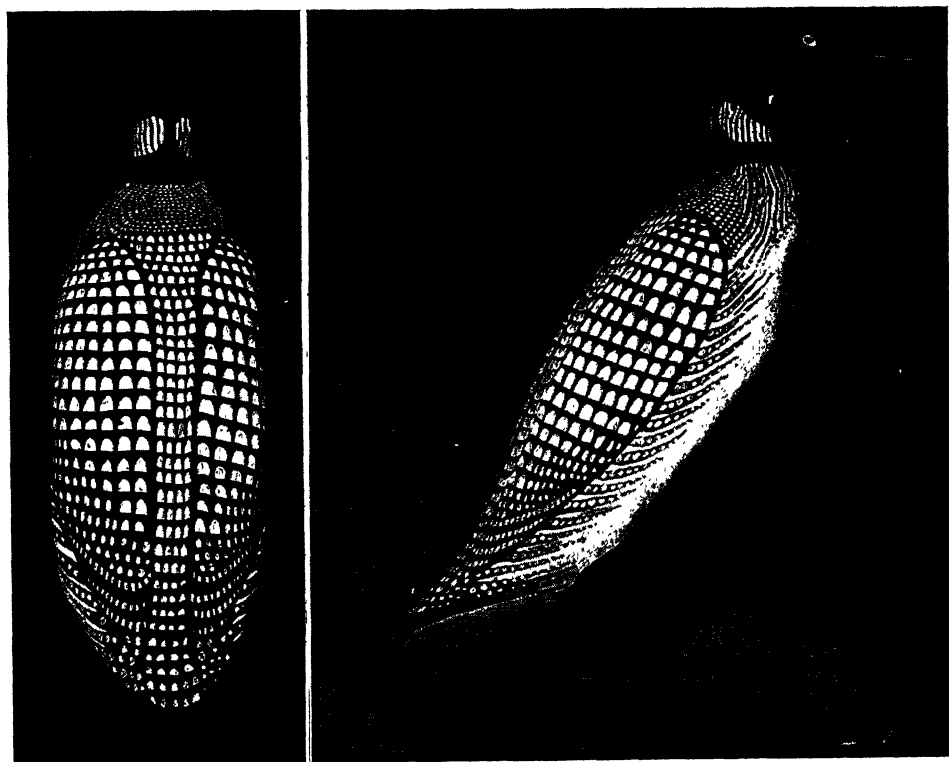


Fig. 87. The painted loon

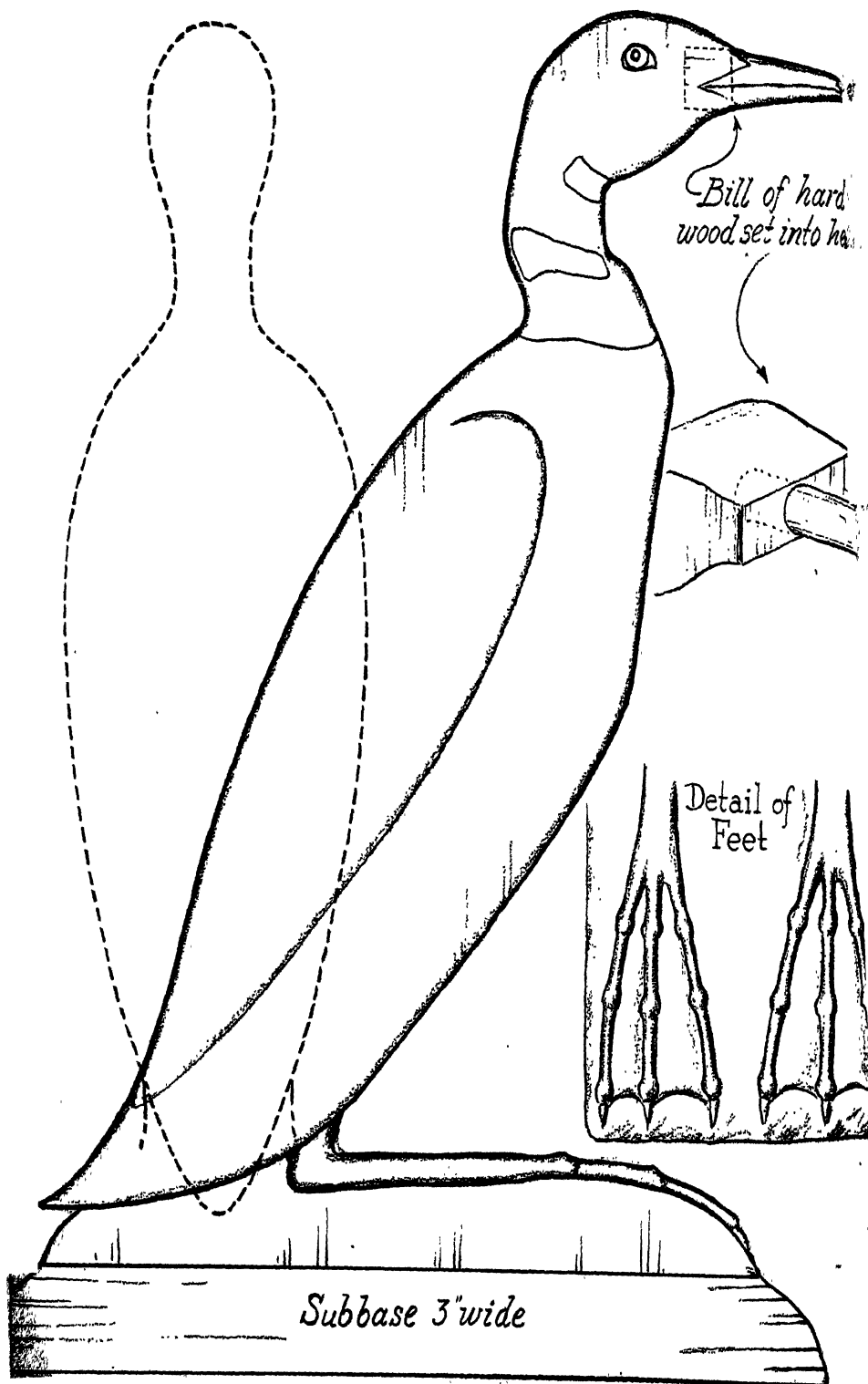


Fig. 88. Full-size pattern of the loon

BIRD STICKS — KINGFISHER

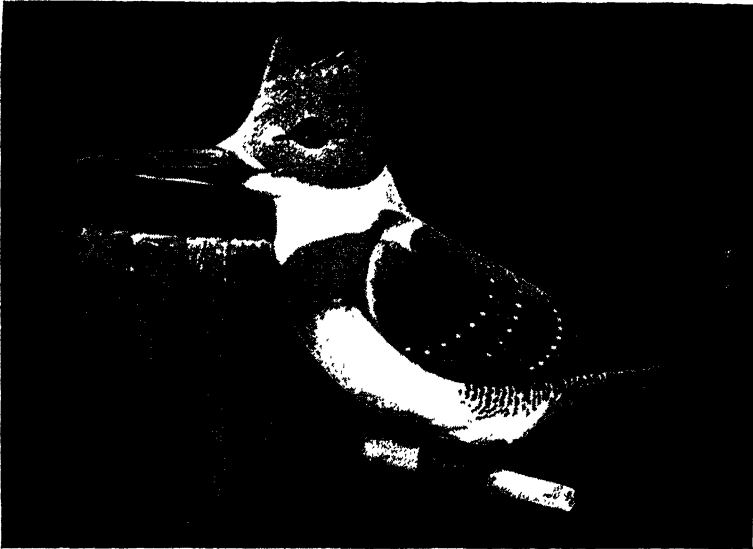


Fig. 89. The painted kingfisher

For those who like bird sticks there is a chance to do a real whittling job which will far surpass those jig-sawed out of plywood. The whittled birds really look lifelike regardless of which way they are facing. Most of the larger birds, such as robins and cardinals, can be whittled out of wood 2 in. thick.

Living in the country, the author has enough real birds around his home, but he made the kingfisher shown in Figure 89, to guard the outdoor goldfish pond. There are too many visits from real kingfishers, who seem to think the small goldfish are real delicacies. The whittled and very realistic kingfisher acts as a guard. Kingfishers, as a rule, take complete charge of certain territories along lakes and rivers, and woe to any other of his kind that trespass.

In order to trace the kingfisher in full size, enlarge the design on a piece of paper, marking off the squares, as indicated in Figure 91. Sandpaper it as shown in Figure 90.

To color the kingfisher, give the entire body a coat of white paint and then paint the parts, as outlined in Figure 91, in a bluish gray. The bill, eyes, shoulder spots, wing tips, and feet should be painted black. After the paint is dry, apply two coats of spar varnish to protect the bird against weather.

Other birds that the whittler may wish to make can easily be traced or copied from one of the many bird books available.

Usually birds for garden sticks are mounted on a $\frac{3}{8}$ -in. birch dowel fitted into a $\frac{3}{8}$ -in. hole in the feet. But, in the kingfisher, a hole was drilled cross-wise through the feet and a round stick was glued into it for a more natural appearance. Then the birch dowel was fitted into the hole, illustrated by the dotted lines at the bottom of Figure 91. The kingfisher now will have a rather livelier roost beside the goldfish pond.

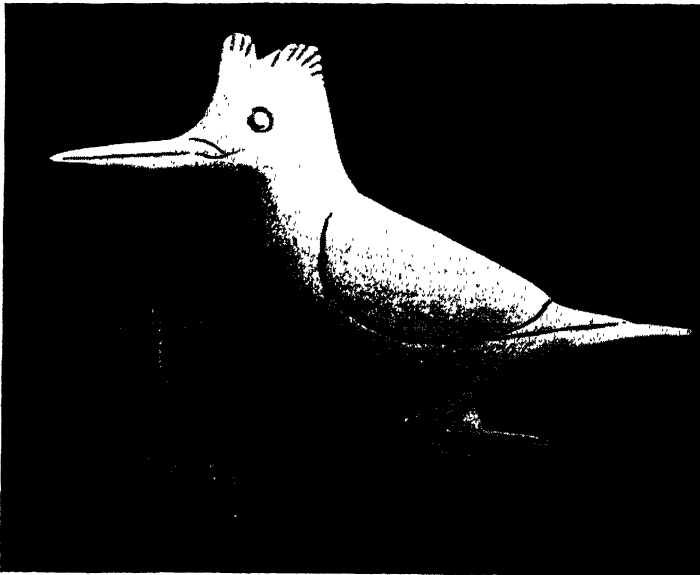


Fig. 90. The sanded kingfisher

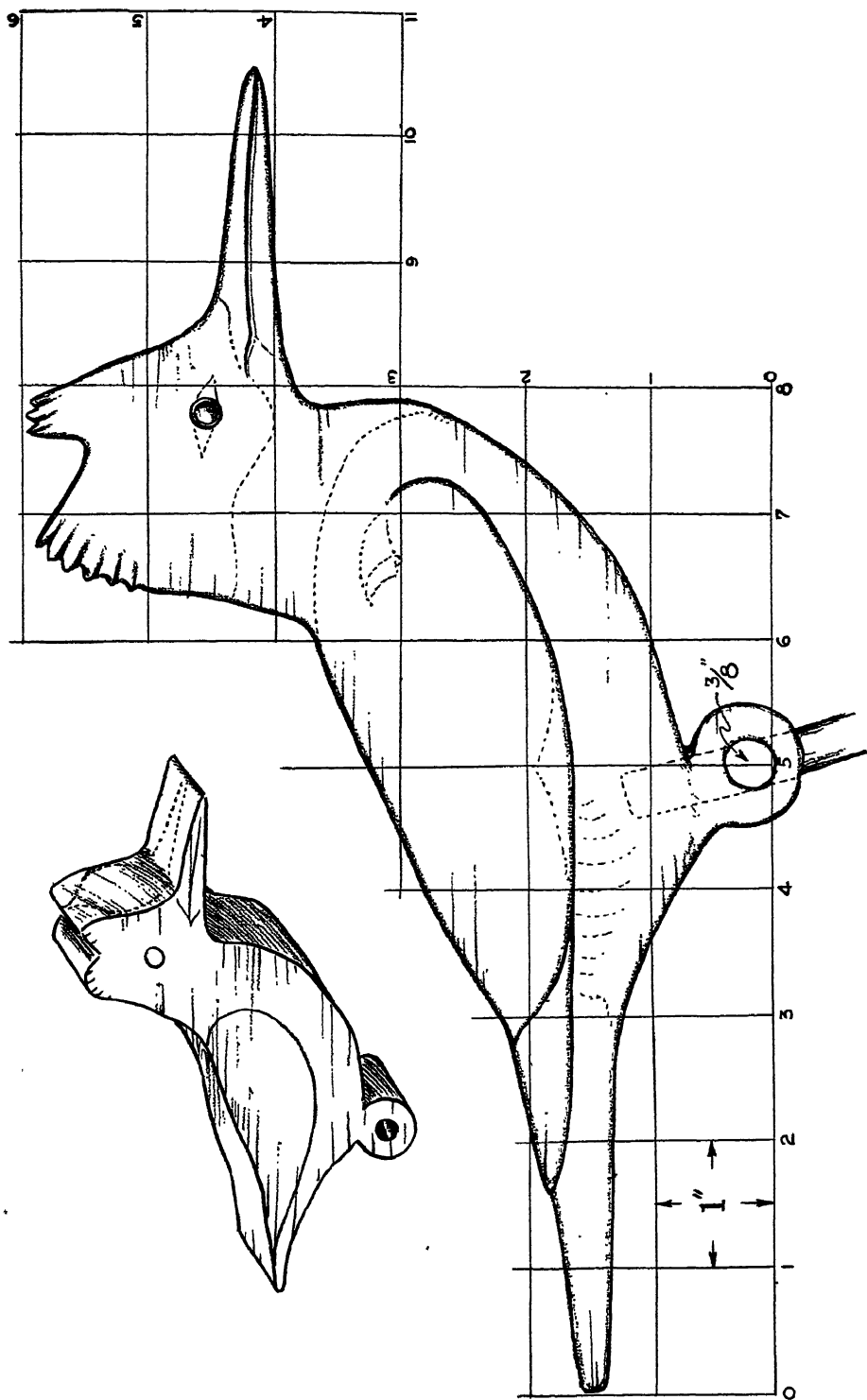


Fig. 91. Because of the size of this bird the pattern could not be shown full size. Enlarge and mark off the squares

BOOK ENDS

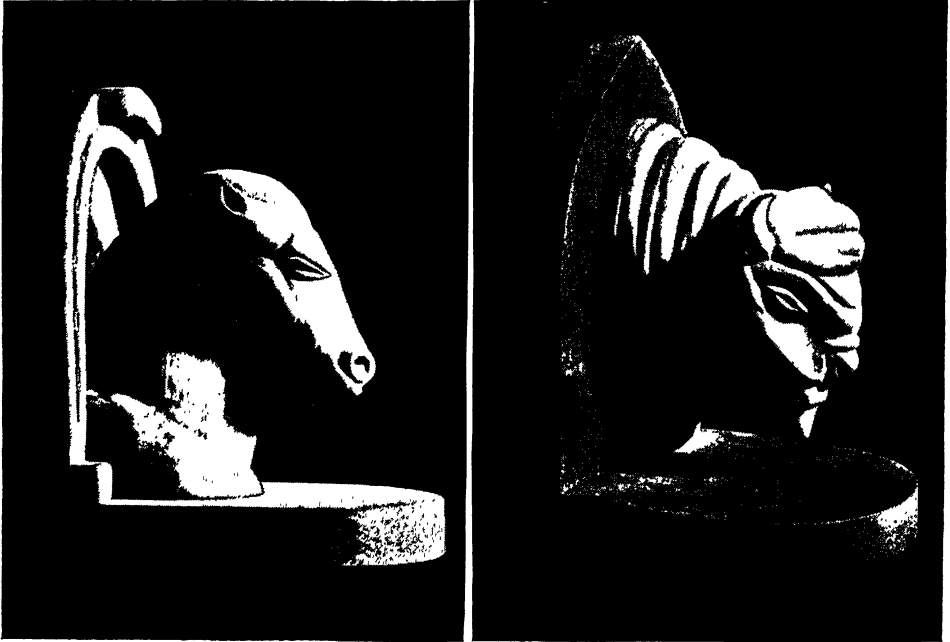


Fig. 92. Horsehead and buffalo-head book ends

The book ends shown in Figure 92 are modern and easy to whittle. They may be of interest because they try the skill of the whittler. The full-size patterns in Figures 93 and 94 may be drawn on a block of wood. Cut out the silhouettes and rough out the general outlines. All of the muscles are sharply defined and conventionalized to simplify the whittling. The hair on the mane of the horse and the heavy wool of the buffalo are finished in smooth masses. These book ends should be sanded down carefully to look their best.

The horseshoe backs shown in Figure 95 are sawed out of a $\frac{3}{4}$ - or $\frac{1}{2}$ -in. piece of board. Figure 92 shows the finished assembly of the book ends, and Figure 96 shows the detailed assembly.

In order to give weight to the book ends, holes should be bored into the back of the buffalo head and in the bottom of the horsehead, and then filled in with lead or Babbitt.

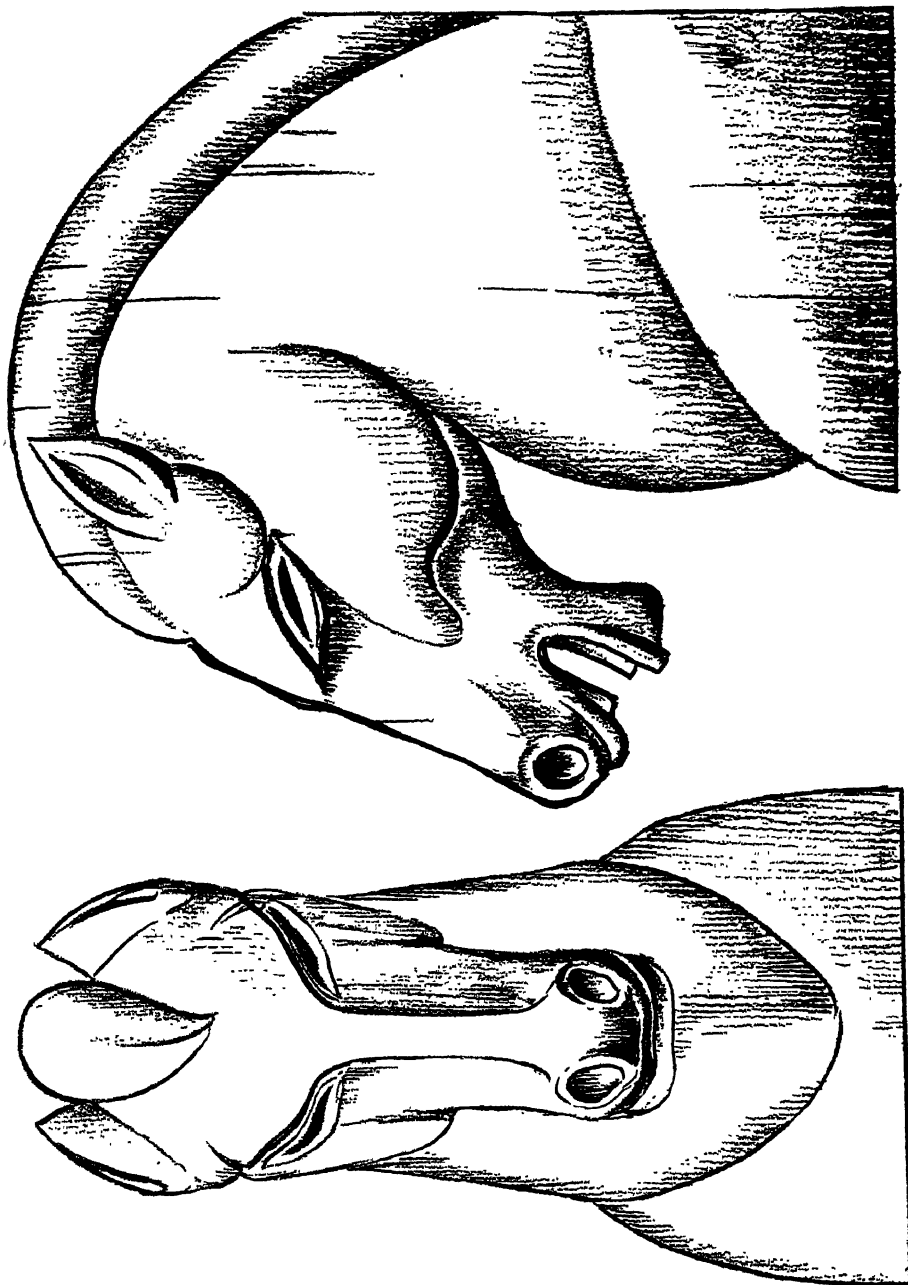
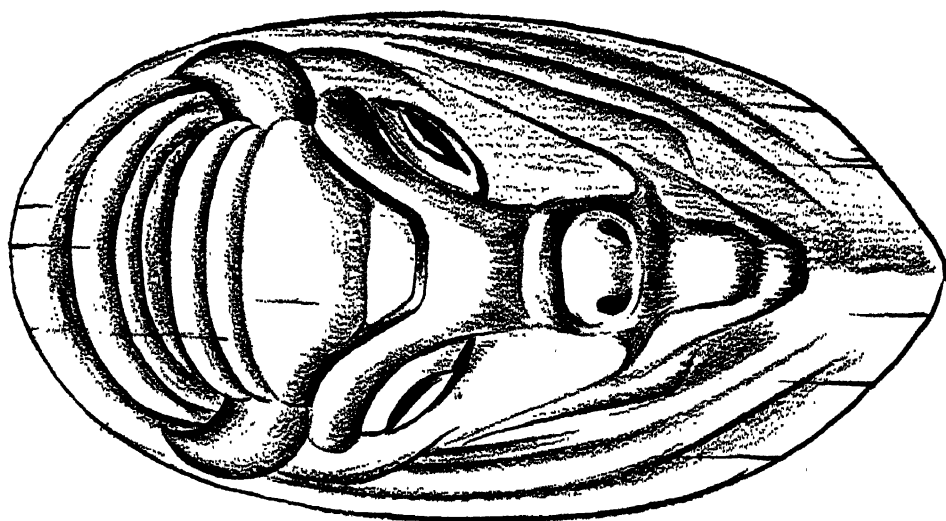


Fig. 93. Full-size pattern of horsehead book ends



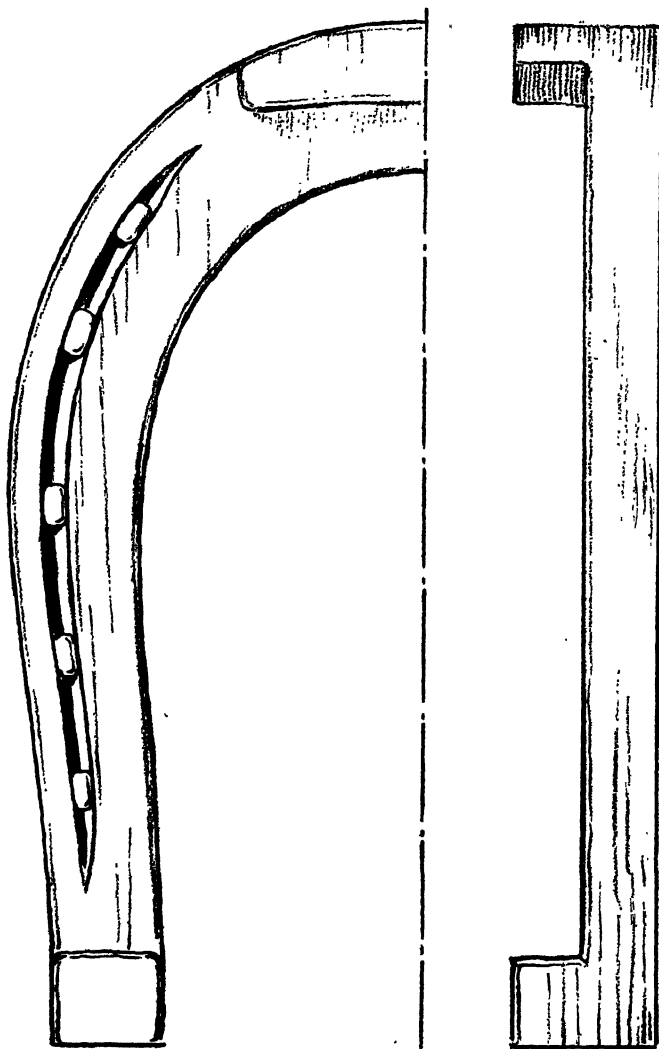


Fig. 95. Horseshoe back for the book ends

Each of the horsehead book ends consists of four pieces: the head, the horseshoe, the backing for the horseshoe, and the base. The different parts should be glued together and also fastened with small flathead screws. If felt is glued to the ends and bottom of the base, the screws may be left flush, otherwise they should be covered with plastic wood. If working with a clear-grained wood, a light or dark stain may be used. After the stain has dried, the book ends may be given a coat of either dull or glossy varnish.

If the grain of the wood is not so attractive, two or three coats of cream or ivory enamel will give the book ends the appearance of fine china.

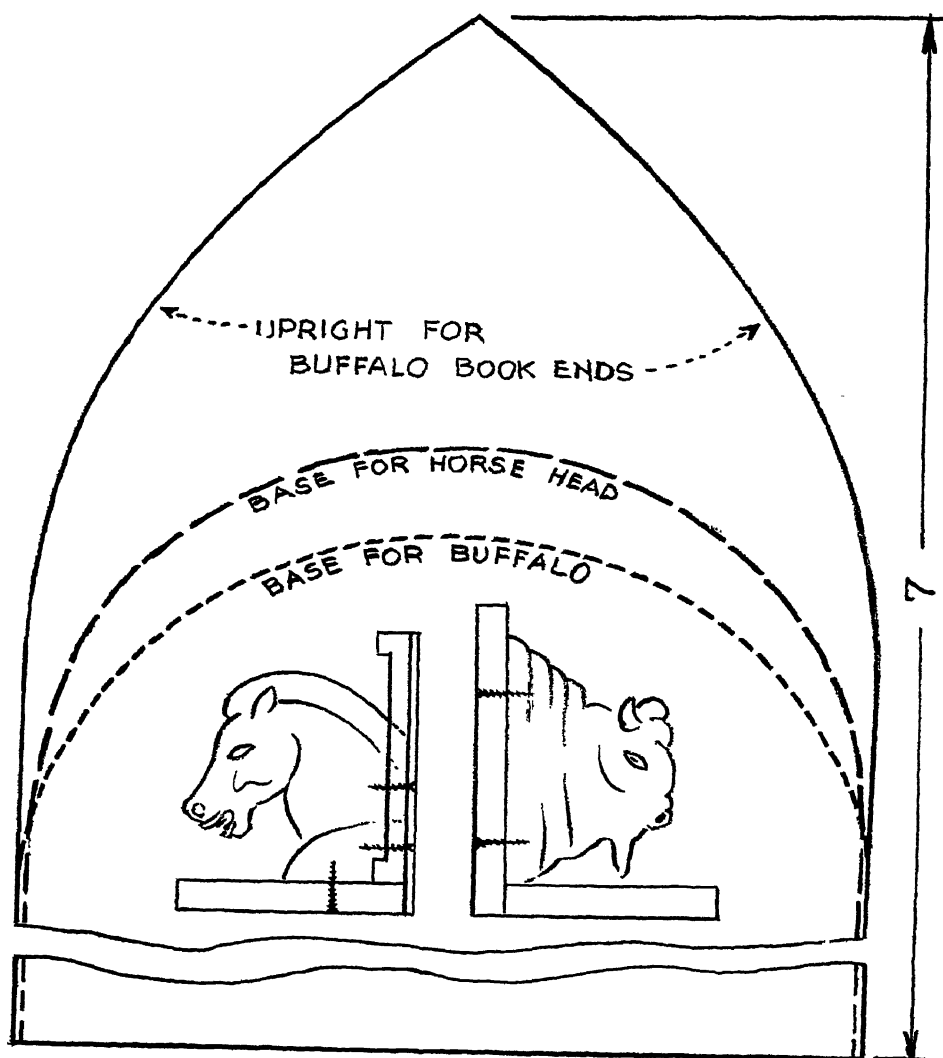


Fig. 96. Assembling the book ends

FACES AND FIGURES

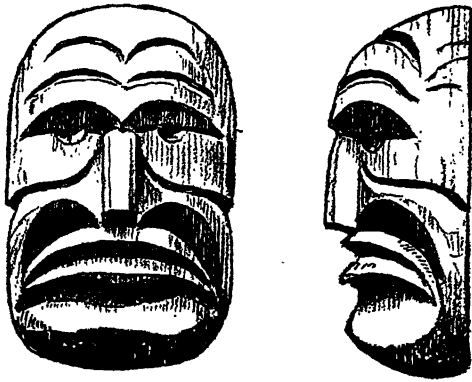


Fig. 97. Full-size pattern of the Iroquois mask



Fig. 98. The Iroquois mask

After whittling birds, animals, totems, and katchinas, it is only natural that we should try our hand at whittling the face and figure. Probably the simplest face to try first would be a mask as shown in Figures 97 and 98. Masks are made by both primitive and civilized people for dancing costumes and decorative purposes. The one shown in Figure 97 is of the type made by the Iroquois Indians. It is rather simple and at the same time interesting. These masks may vary in size from the one shown in Figure 97 to dance masks 12 in. or more in height. A good, sharp, small blade is required. A fine-grained softwood is the easiest to whittle.

Small masks can be used for lapel ornaments or neckerchief slides. When made about 5 in. high they can be used for book ends, or if made full size they can be used for wall hangings.

The little peasant man shown in Figures 99 and 100 offers a more interesting task. It is whittled with a minimum of cuts, which the author has tried to show in his drawings. If the knife is razor sharp and the wood is close grained it will be surprising what a single cut will do to change the expression or the posture.

When it is finished, it may be colored with thin water-color paints. Color the hair and beard white, the face flesh or pink with a little red on the cheekbones, and a bit of pink at the mouth. The vest is brown, shirt sleeves green, pants light gray, and boots dark gray mixed with a little brown.

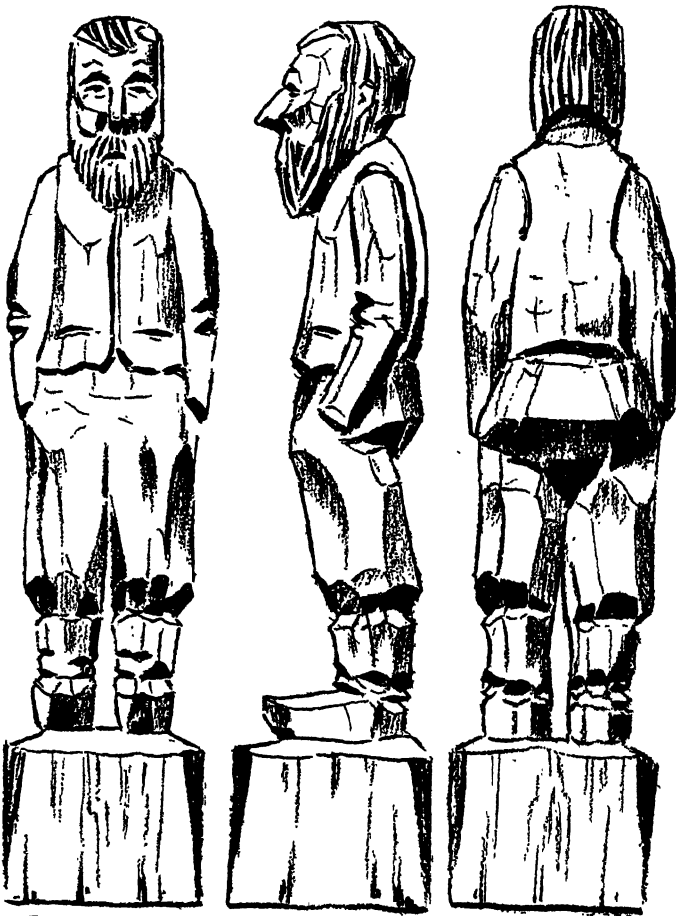


Fig. 99. Front, side, and rear views of the little peasant man



Fig. 100. The peasant

A SET OF WHITTLED CHESSMEN

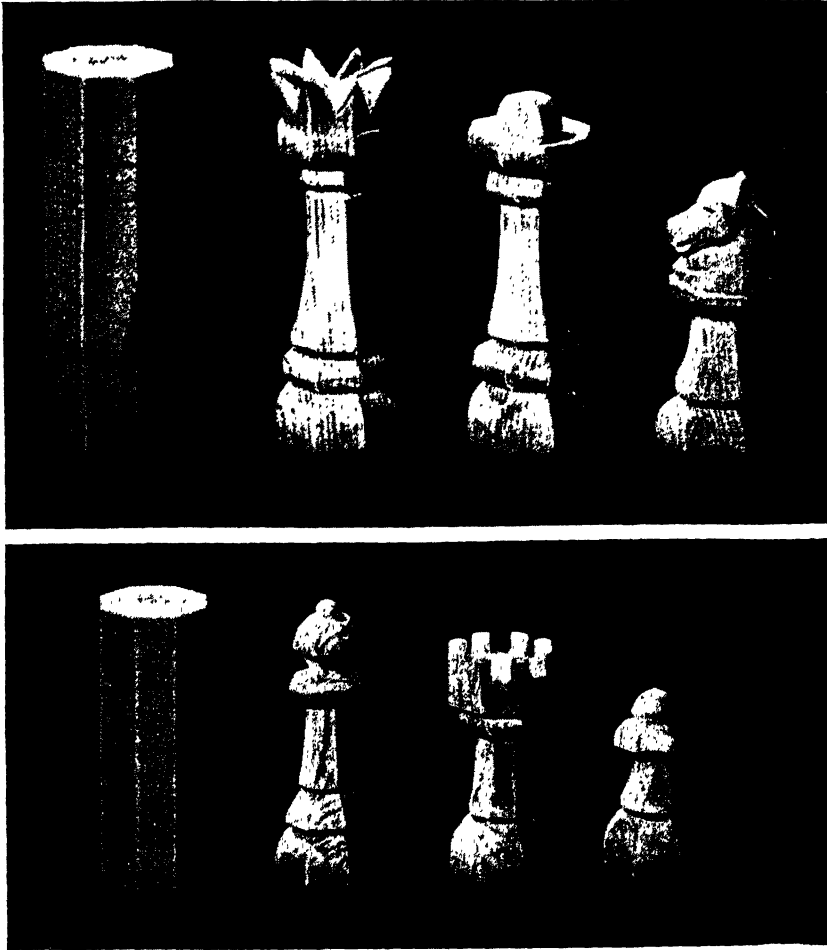
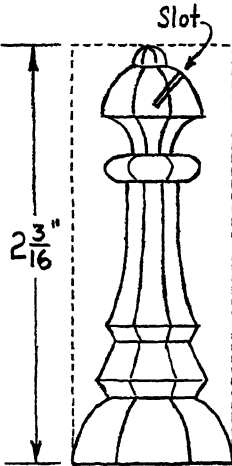
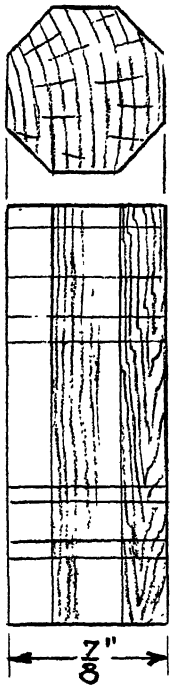


Fig. 101. The completed set of chessmen

Moderately priced chessmen are either turned on a lathe or they are cast. The very expensive ones are carved or whittled.

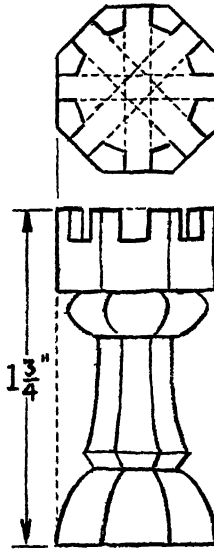
It is not a very difficult task to whittle a beautiful set of chessmen, with a small-bladed knife that has been properly sharpened, in a few evenings.

The first thing to decide is whether the men are to be made of soft- or of hardwood. Since the pieces are small and do not require too much



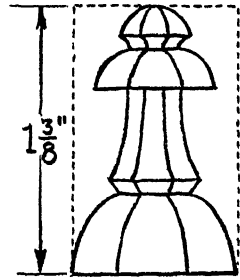
Bishop

2-WHITE, 2-BLACK



Castle

2-WHITE, 2-BLACK



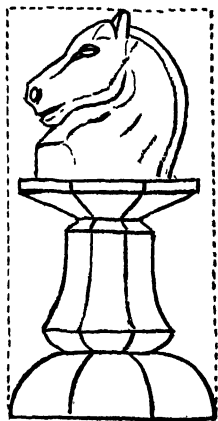
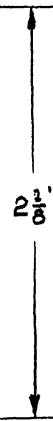
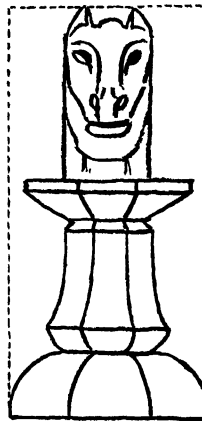
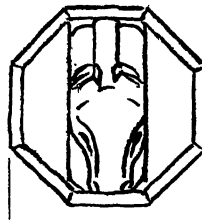
Pawn

8-WHITE, 8-BLACK

work, it may be well to choose hardwood, so that continued use will not nick and dent them so easily. Birch or maple may be used for making the white men, and walnut or mahogany for the black men. To make the one set darker a coat or two of walnut stain may be applied. Of course, all of the men may be whittled out of birchwood, and then the one set may be painted with a coat of flat black paint. The final finish may consist of several coats of clear varnish or lacquer.

If made of softwood, such as bass, the whittling will take less time, and the chessmen will be quite serviceable.

The simplest way to start is to cut strips of wood to octagonal shape on the circular saw. These



Knight

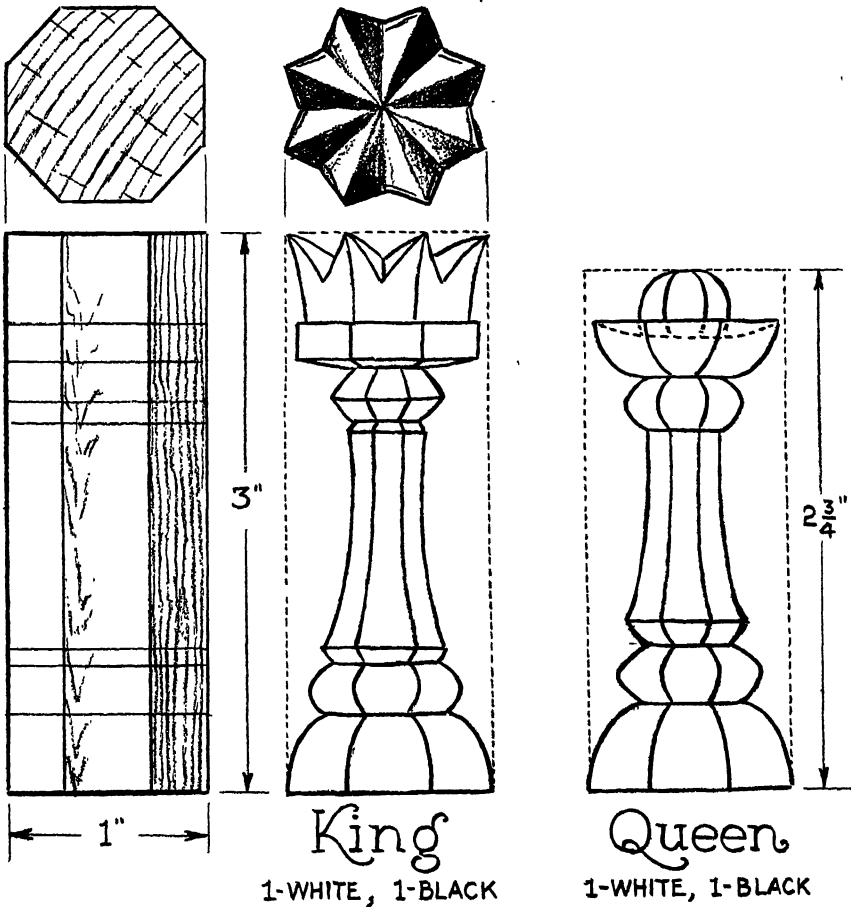
2-WHITE, 2-BLACK

Fig. 102. Chessmen

pieces should then be planed with a sharp plane. About 2 ft. of the 1-in. stock and 2 ft. of the $\frac{3}{8}$ -in. stock will be used for each color. This will allow for some spoilage.

Mark off the divisions and whittle the shapes shown in Figure 102. The eye will quickly detect whether the cuts have been correctly made. One who has done little or no whittling should make a few trial cuts, going all the way around the stick. It is really surprising how easy the chessmen are to whittle and how quickly they can be made. Be sure to have the bottoms squared off properly. Cut all blanks to length with a power saw, or in a miter box, before starting to whittle. The bottoms also may be squared off on a sanding disk. Be sure that they all stand properly because after they are finished it will be a lot harder to get them to stand straight.

Finishing the chessmen is a matter of personal taste. The knife cuts may be left as they are, or the pieces may be sanded before they are varnished (see Fig. 101). For sanding, fasten a strip of fine sandpaper to a piece of galvanized iron with waterglass glue or shellac. Use this method in the same manner as you would use a thin knife file. This permits sanding all the deeper cuts.



INDIAN-HEAD NECKERCHIEF SLIDE

A rather more difficult neckerchief slide is shown in Figures 103, 104, and 105. This Indian slide is very ornamental when painted. In whittling faces like these, study the drawings carefully before cutting, especially after the rough cutting and forming is done. Even the simplest face is rather tricky, as every cut tells a story. So whittle slowly, study the drawings, and study each cut until you know what it will mean in the finished work.



Fig. 103

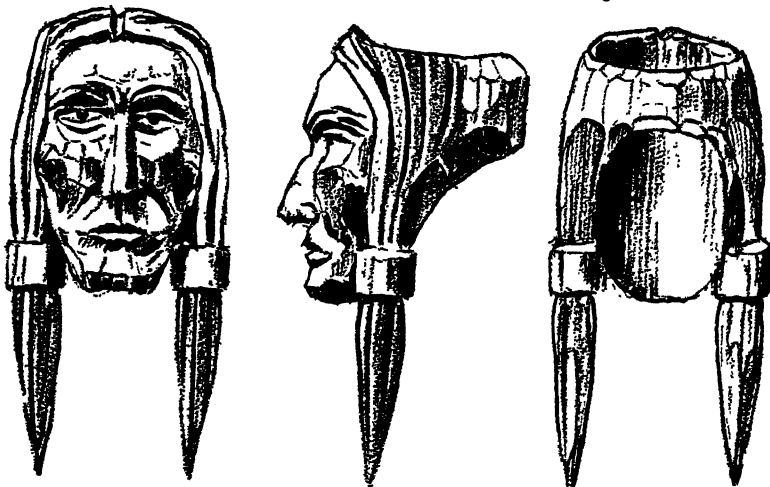


Fig. 104. How to carve the Indian-head neckerchief slide

This neckerchief slide should be painted with water colors: the face an Indian red, the lips a brighter red, the eyes black, the hair black, and the hairband yellow. Give the face a thin coat of shellac and the hair several coats to give it a glossy appearance. Leave the inside of the slide unfinished and slightly rough to prevent it from slipping.

The Indian head may also be used as a lapel ornament, in which case the back should be left flat.



Fig. 105. Indian
neckerchief slide

GRIZZLY BEAR



Fig. 106. The finished grizzly

The grizzly bear presents a real problem to the whittler. It may look simple to whittle, but it embodies quite a bit of undercutting which makes it rather difficult. Figure 109 shows five different views from which to work. Study them, and figure carefully before you begin to whittle. Since the grain runs up and down, most of the cutting will be across it. This means that the knife must be razor sharp. A small, crooked knife will come in handy on this job. To carve the bear you may use soft white pine, cottonwood, or poplar.

To start, draw or trace one of the side views onto the block of wood and cut out the silhouette on a band or jig saw. Then bore the holes between the legs as shown in Figure 107. The next step is to block out the legs and head as shown in Figure 108. If these simple directions are followed, it will be a lot easier than trying to whittle out the rounded shape from the start. After the legs are separated and the head squared in, start the

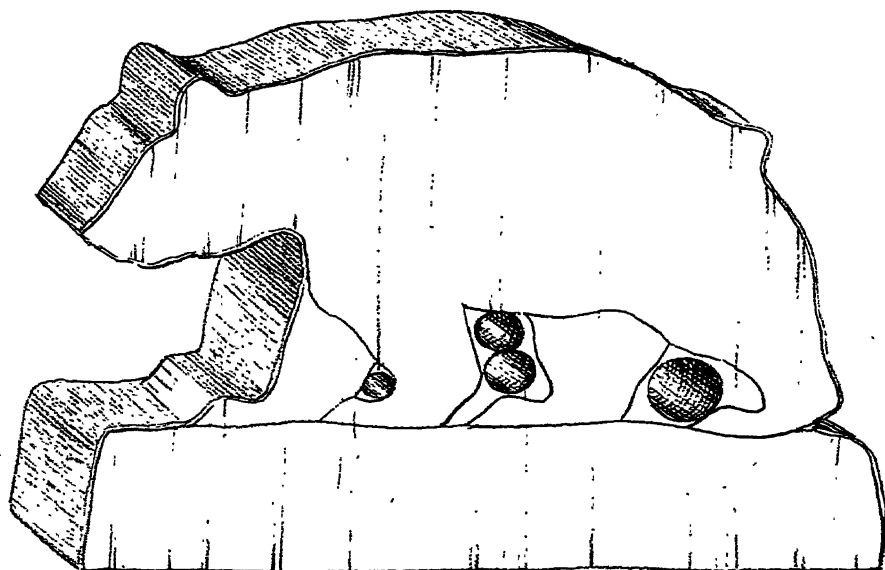


Fig. 107. Cutting out the silhouette

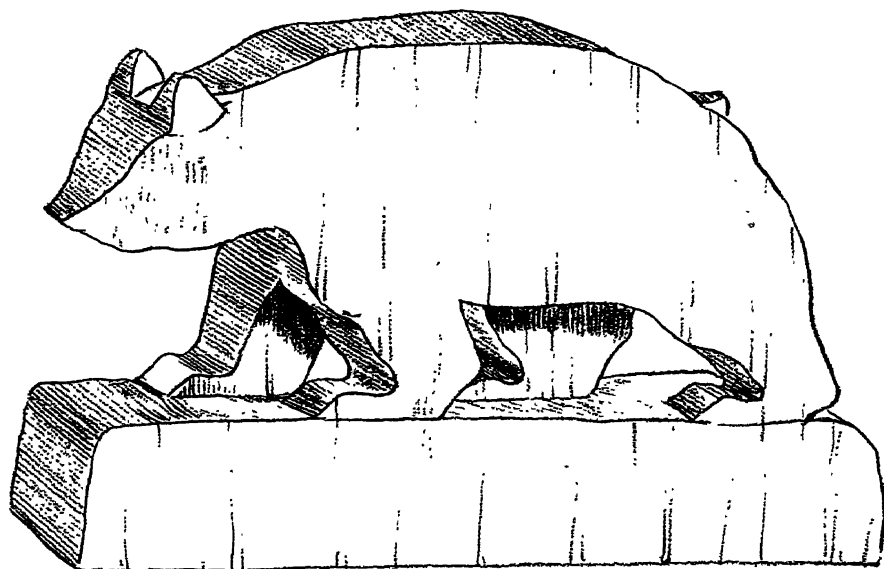
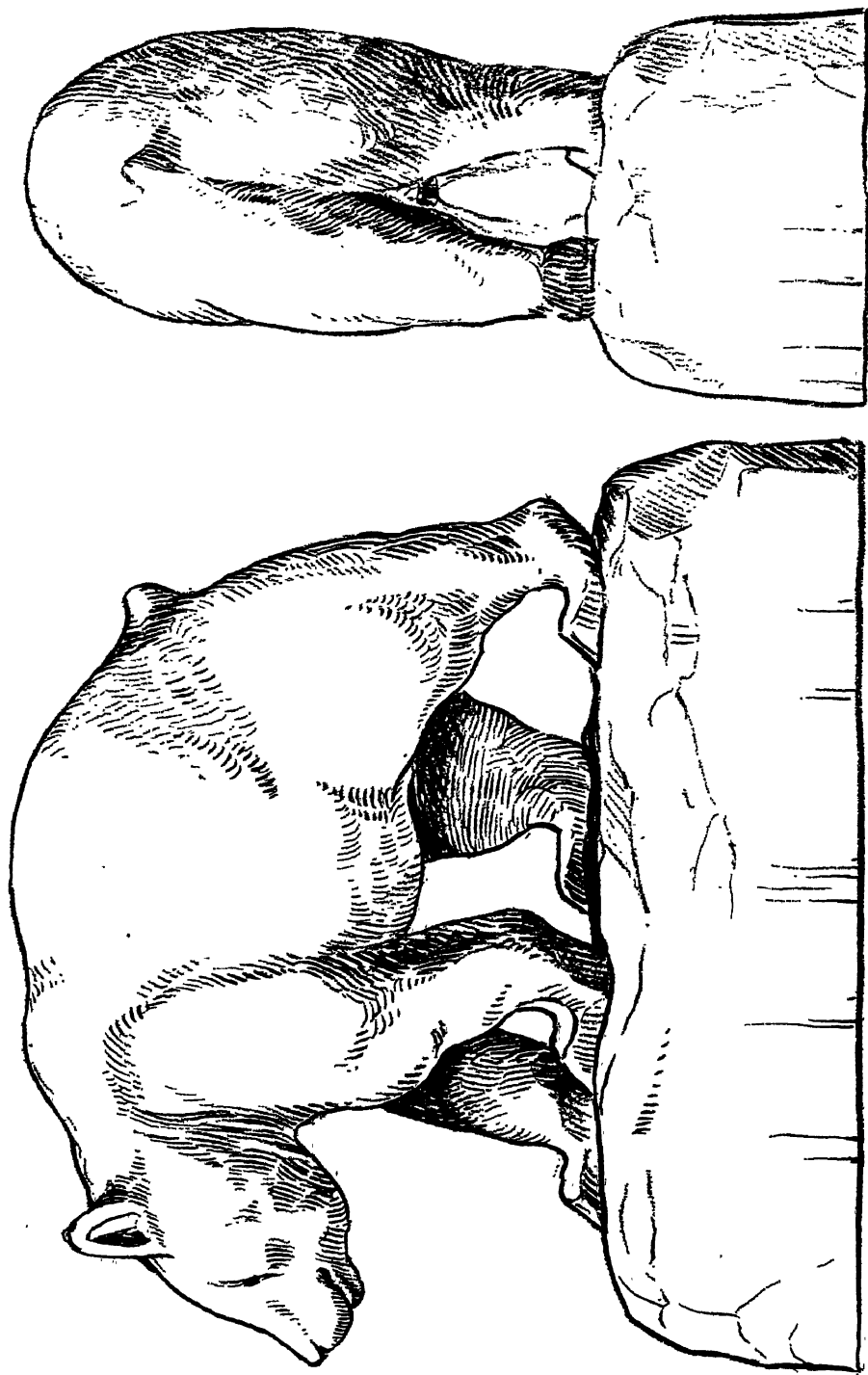


Fig. 108. Blocking out the head and legs



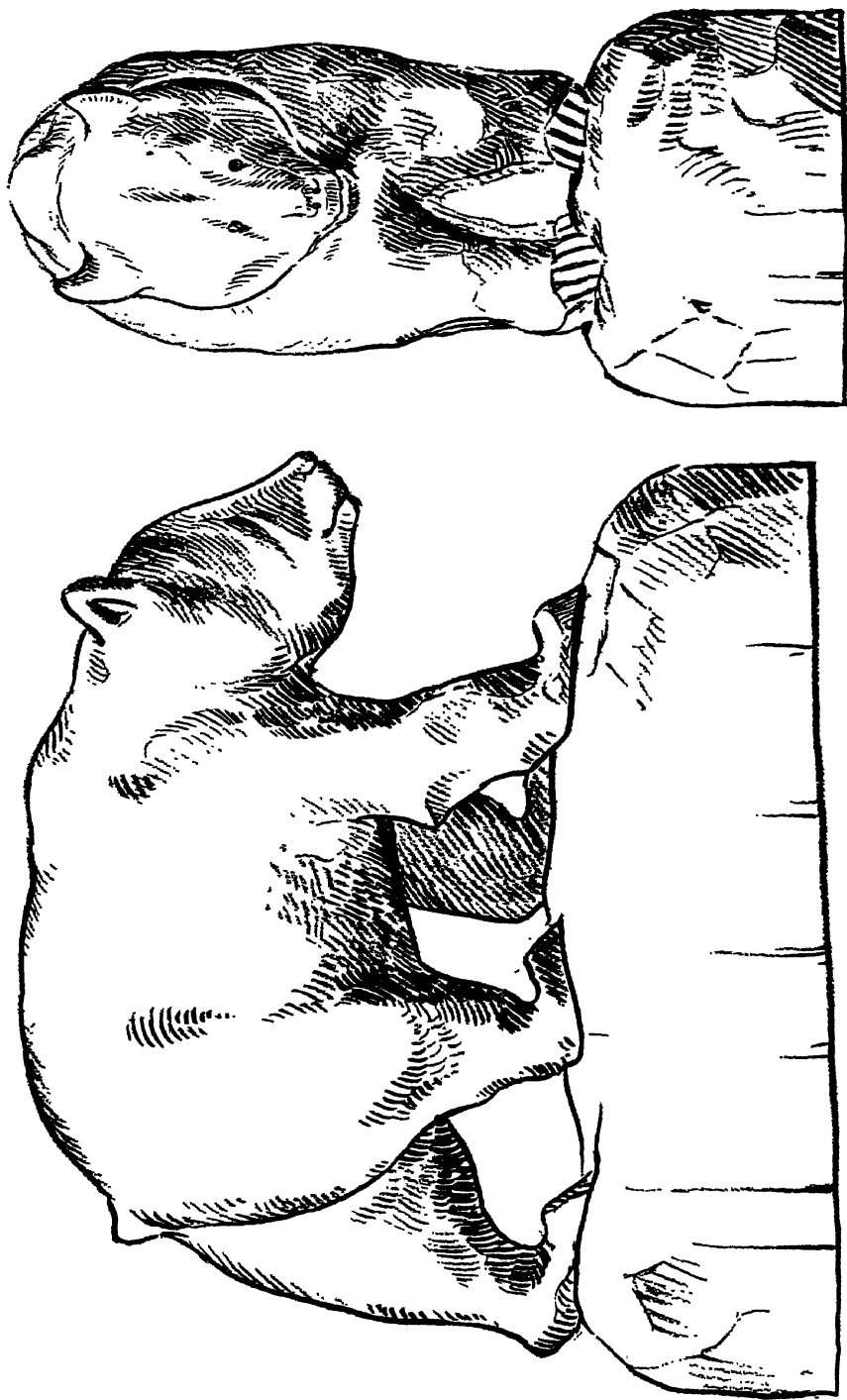
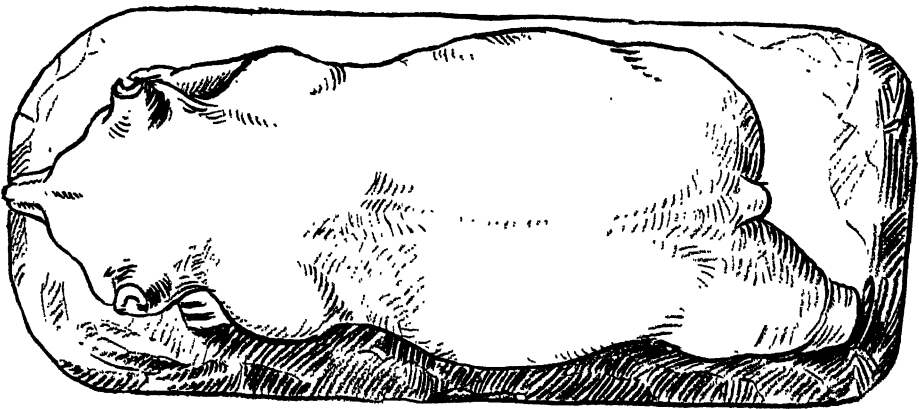


Fig. 109. Four views of the grizzly bear. Illustrations may be used as full-size patterns. Top view appears on page 84

rounding up process gradually. A long, thin-bladed knife will be found best for cutting beneath the body and around the legs.

After having whittled out the grizzly, the next question is how to finish it. It might be suggested to leave clean knife cuts rather than to try to make the grizzly's hide look like fur. After the bear looks just about as you want it, go over the whole figure again with a razor-edged knife, making small clean cuts. Then sandpaper the face and ears a little just to smooth them. Do not sand the entire bear, otherwise it will look as if it were skinned.

After having gone over the entire bear, it may be stained with a yellowish brown stain or water color (see Fig. 109). The base may be colored gray. Do not use oil stain, as the predominance of end grain will make it too dark.



Top view of the grizzly bear

HOWLING WOLF

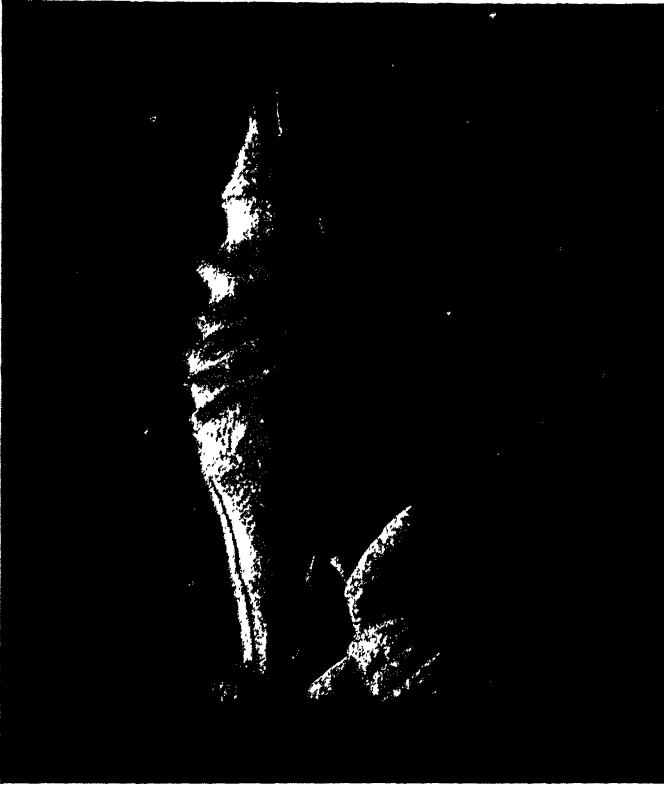


Fig. 110

A piece of wood $1\frac{1}{4}$ by $4\frac{1}{2}$ in., with the grain running up and down, is required for whittling out the wolf shown in Figures 110 and 111. The one shown here was whittled out of a piece of mahogany but any soft-wood will do.

Draw the outline on the block and cut out the silhouette in the usual manner. Notice that the tail projects $\frac{1}{2}$ in. from the left side of the wolf. Before starting to rough out the figure, cut $\frac{1}{2}$ in. in from the left side of the wolf, leaving the part for the tail stand. Then start blocking or roughing out. No base has been left on this piece, which makes the lower part much

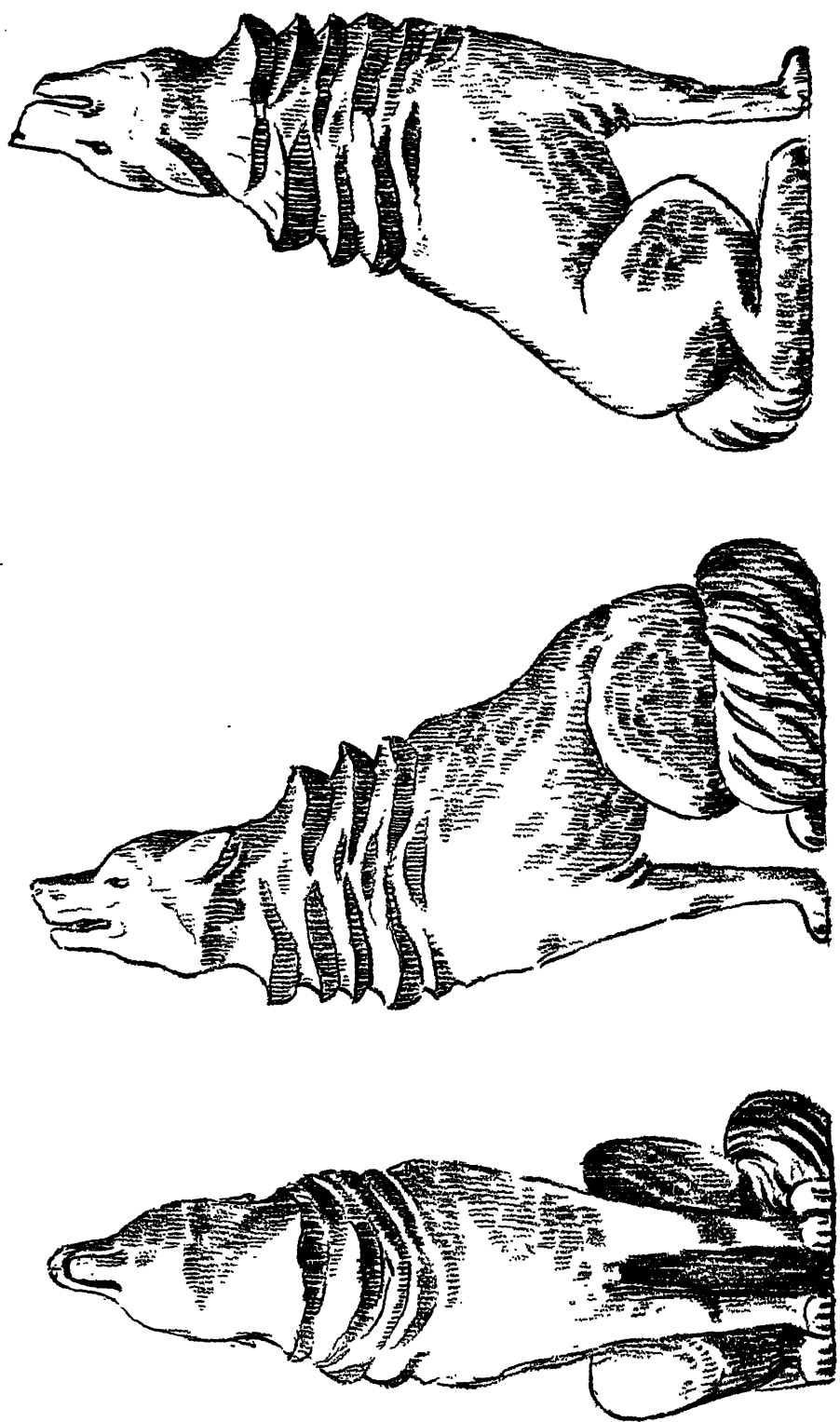


Fig. 111. Front and side views of the howling wolf. Rear view appears on page 87

easier to whittle. The ruff or hair around the neck and the tail has been made quite simple. The figure has been left with the knife cuts showing. The wolf may be sanded, but in reality the knife cuts should be allowed to show so the figure will have a more rugged appearance which is in keeping for an animal of this kind.

As far as the finishing goes, the wood may be left in its natural state, or it may be given a few coats of wax to prevent soiling. A glossy finish will not be very appropriate for this wolf.



Rear view of the
howling wolf

DUCKS

For Wall Decorations or Lapel Pins

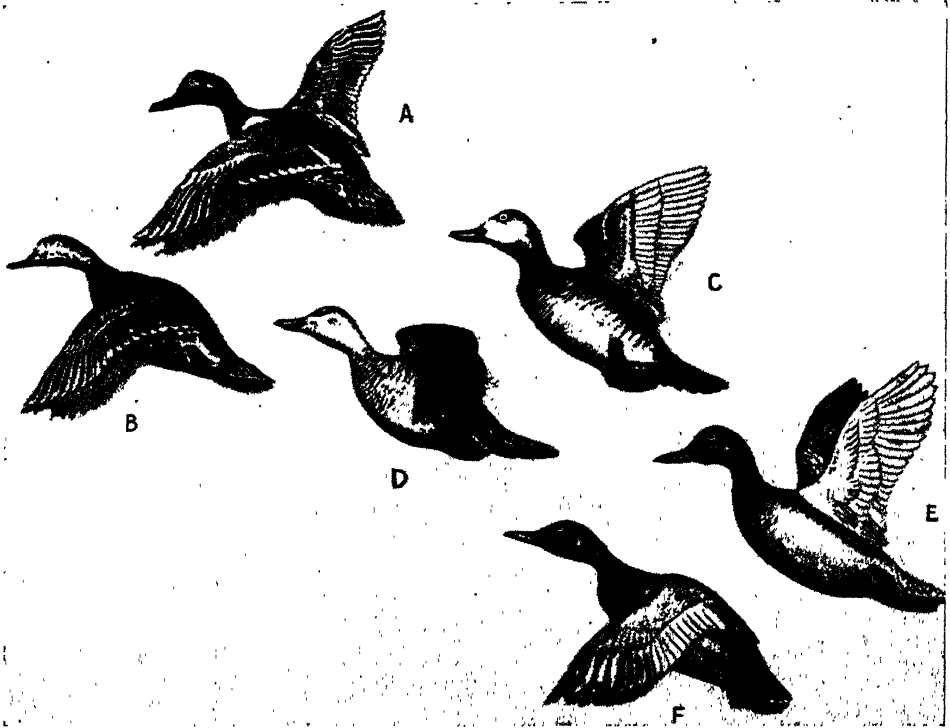


Fig. 112. The entire flock

The whittling project shown in Figure 112 will be very interesting especially to duck hunters. Although only three pairs of ducks are shown, each pair may be colored differently so as to represent a flock of various kinds. It is impossible to show colors, but it is suggested that the whittler go to the library and look through books of birds for the coloring. Use water colors and a couple of coats of clear lacquer (clear fingernail polish) for finishing. All the ducks shown are whittled half in relief and half in the round, one flat side being left for the wall side.

Study Figures 113, 114, 115, 116, and 117 before starting to whittle.

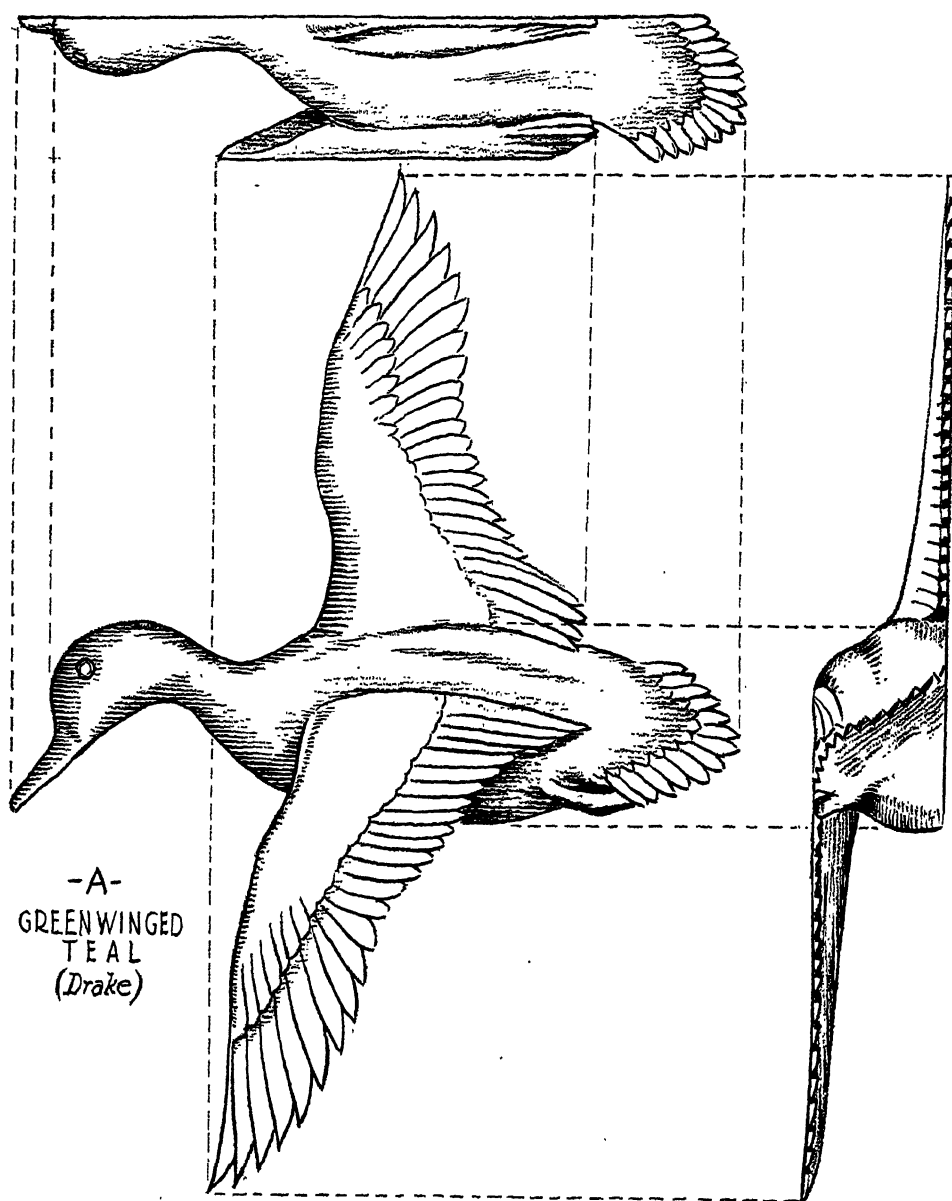
Figure 113 shows progressive steps from silhouette to the sanded finish. Figure 114 shows all the ducks after being sanded. All wing and tail feathers should be shown with rather fine V cuts. In making the male green-winged teal A, be sure to flatten its back as shown in Figures 114 and F, 117. This gives the duck a better perspective. If its back is not flattened, the bird will appear as if it were flying by flapping its wings alternately.

Figure 112 shows how a flock of whittled ducks may be hung on a wall. For lapel pins, the ducks should be made about $\frac{2}{3}$ the size shown in Figures 114, 115, and 116. A razor-sharp, thin-bladed knife is required for cutting out between the wings, since it is necessary to cut directly against the grain. The ducks shown at C, Figure 115, and E, Figure 116, require this material to be removed.

Basswood or birch should be used for these ducks as too soft a wood will be likely to break off at the ends of the feathers. Since these ducks are usually viewed straight on, a certain amount of thickness may be



Fig. 113. From silhouette to finished duck



-A-
GREENWINGED
TEAL
(Drake)

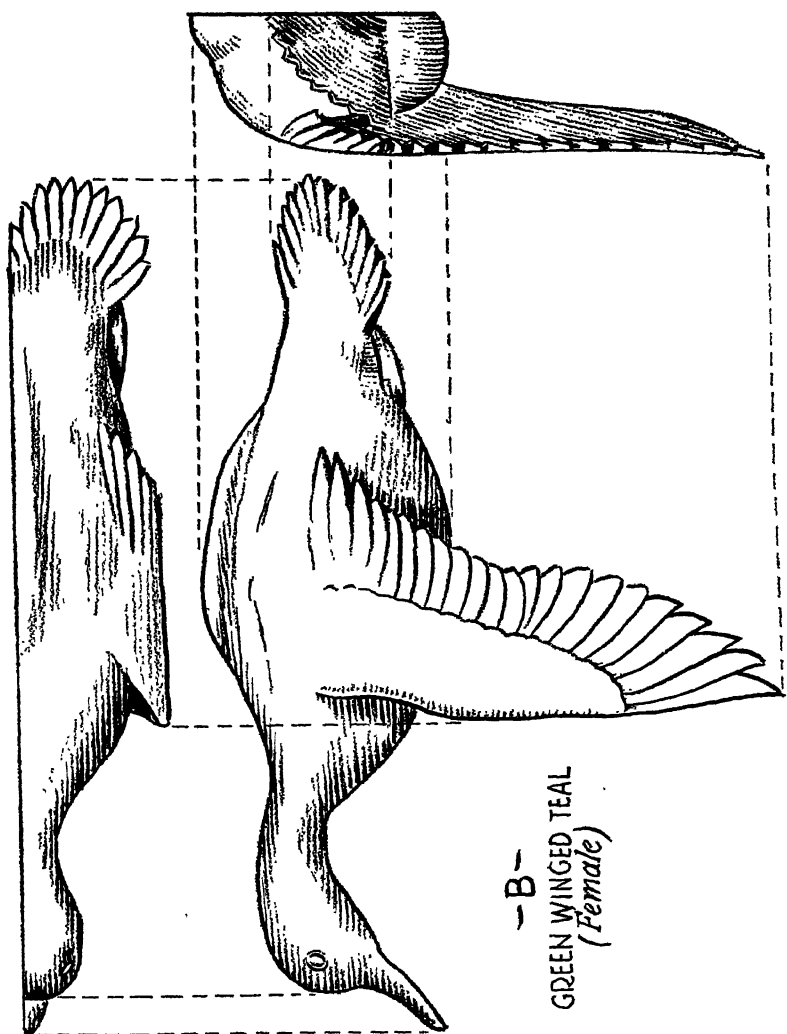
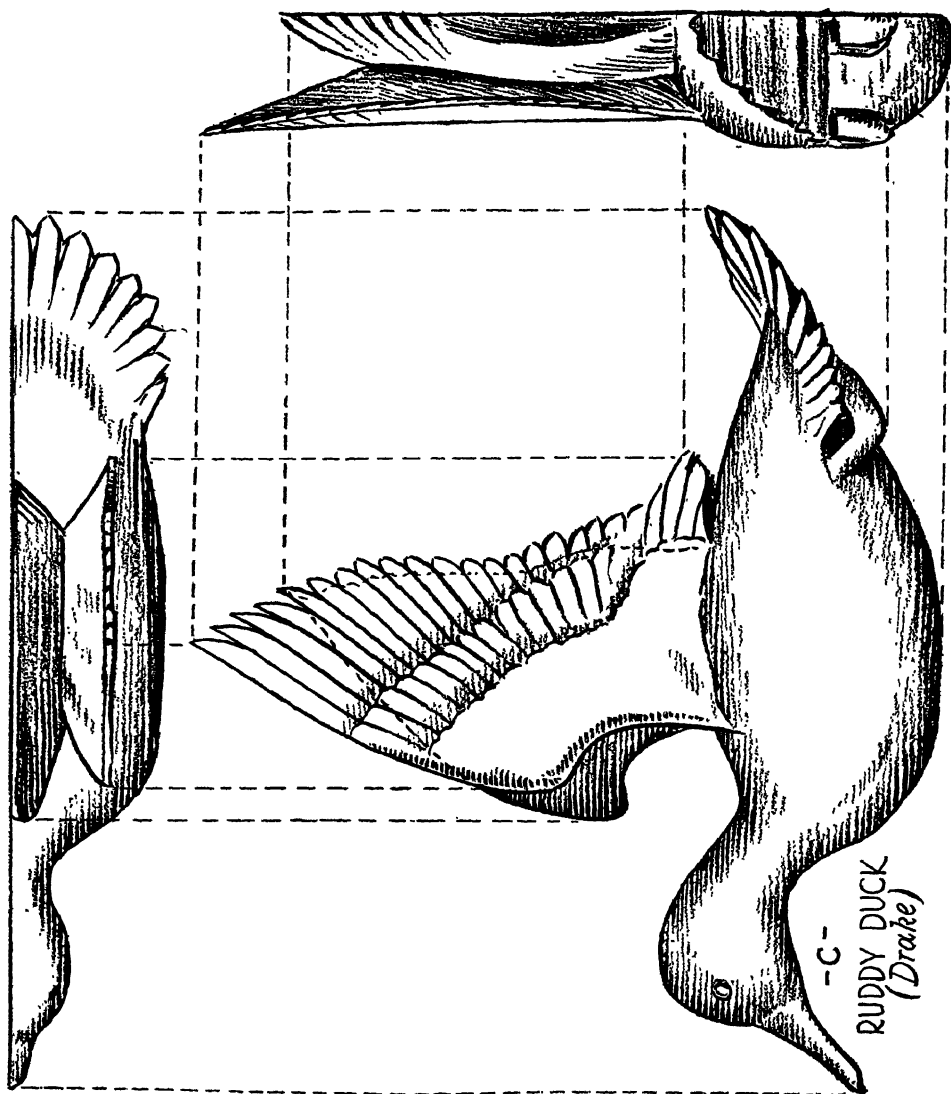


Fig. 114. A pair of green-winged teals. All patterns are full size



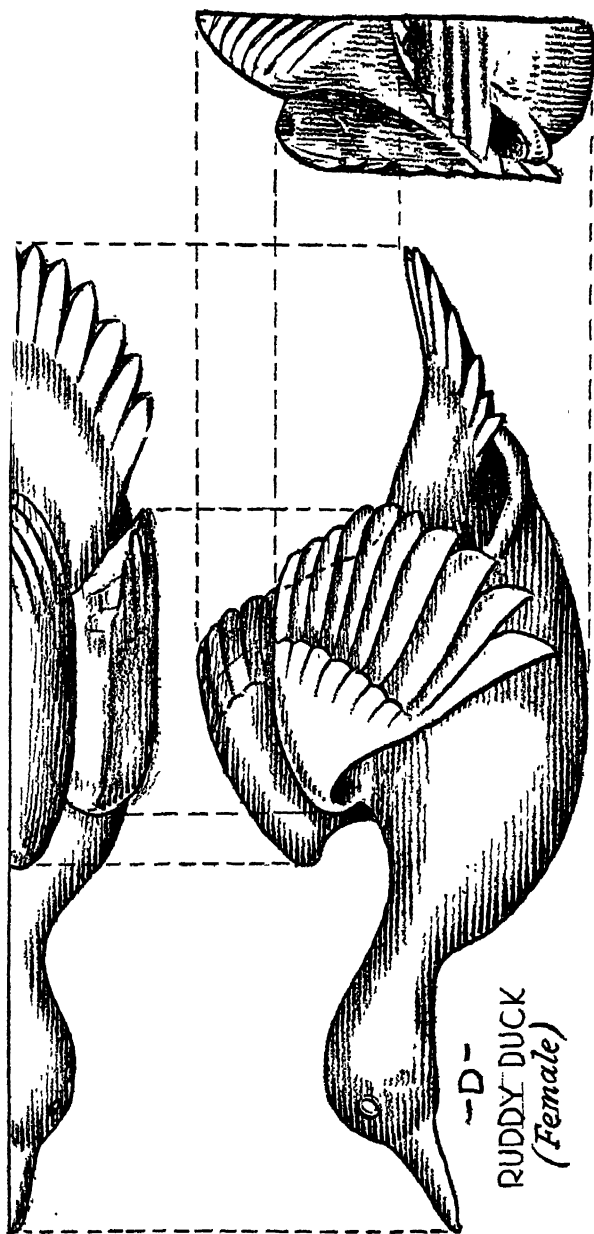
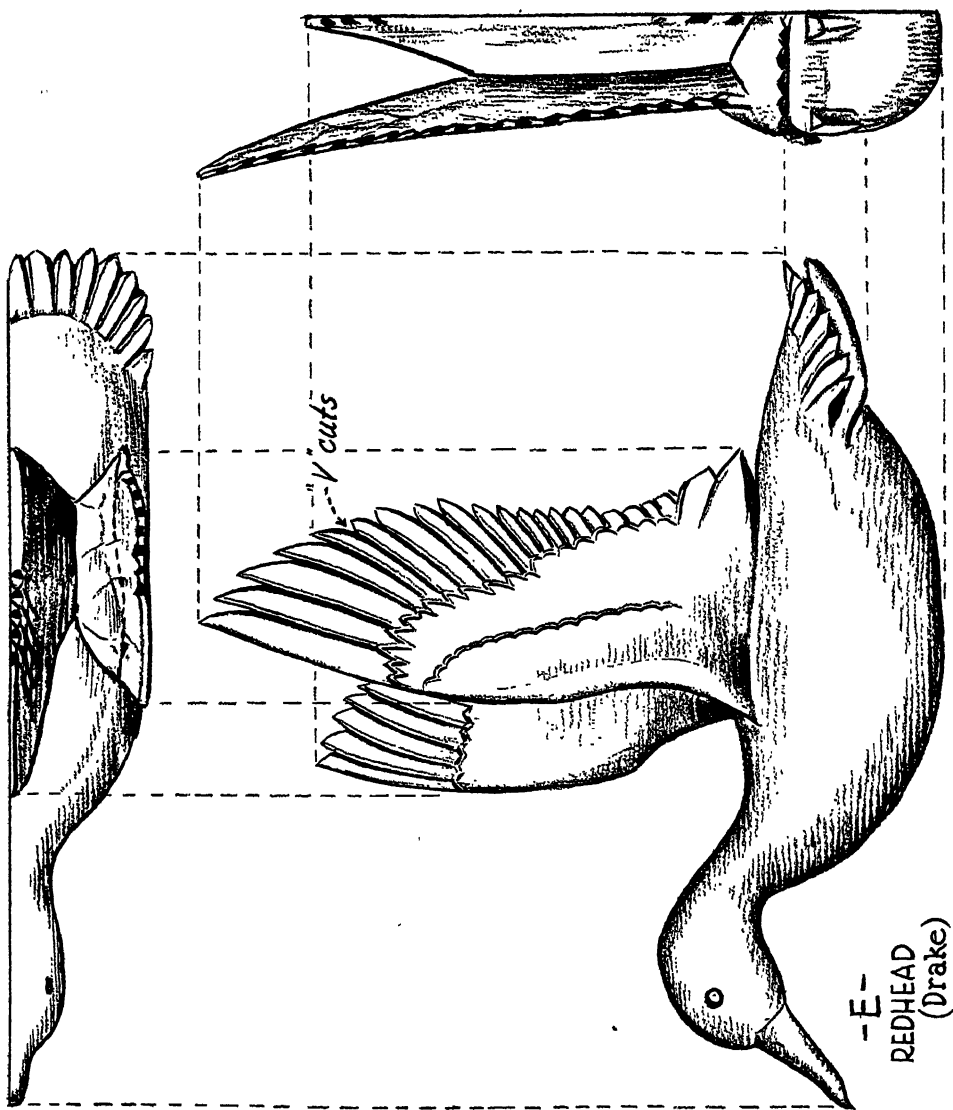


Fig. 115. A pair of ruddy ducks



-E-
REDHEAD
(Drake)

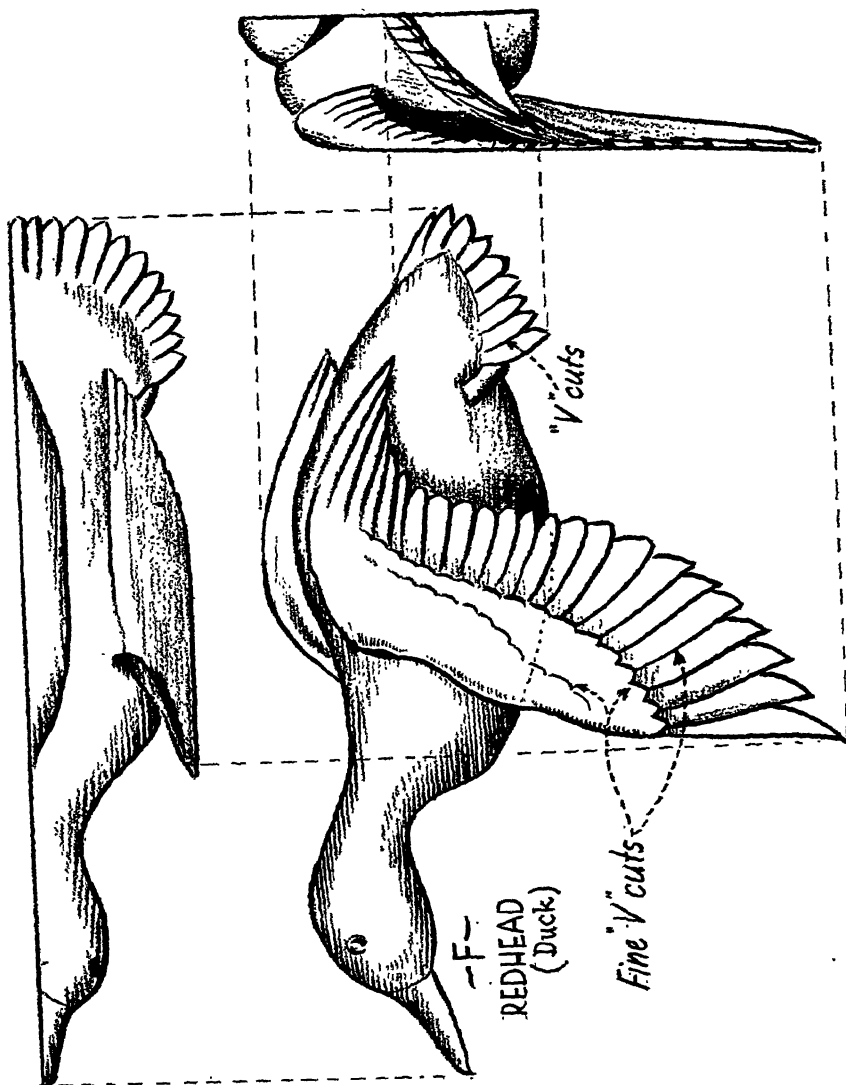


Fig. 116. A pair of redheads

allowed in the wings and wing feathers. The grain of the wood should run the long way, although if birch is used, it will not matter much which way it runs.

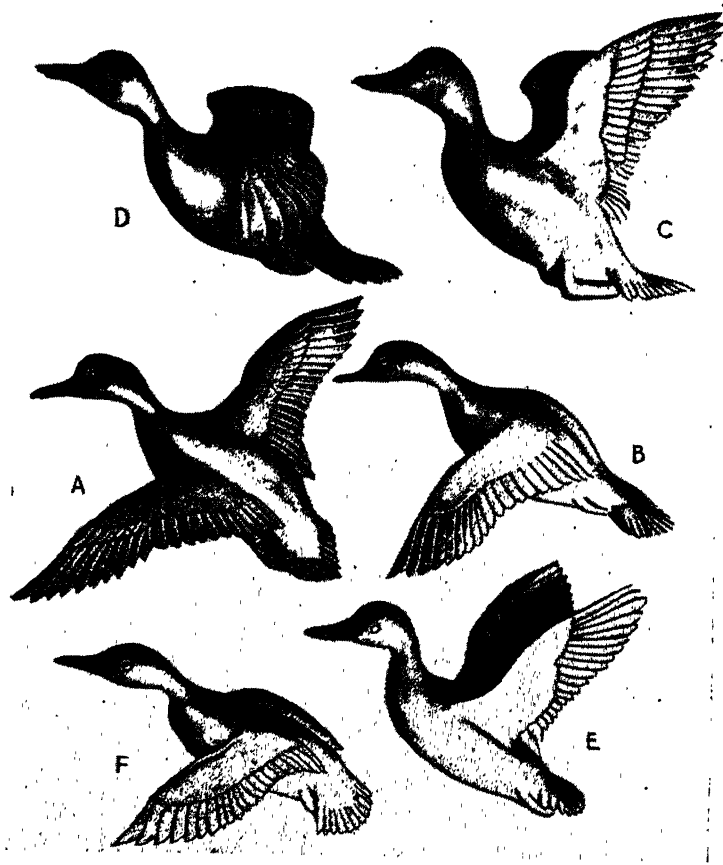


Fig. 117. The ducks ready for their colors

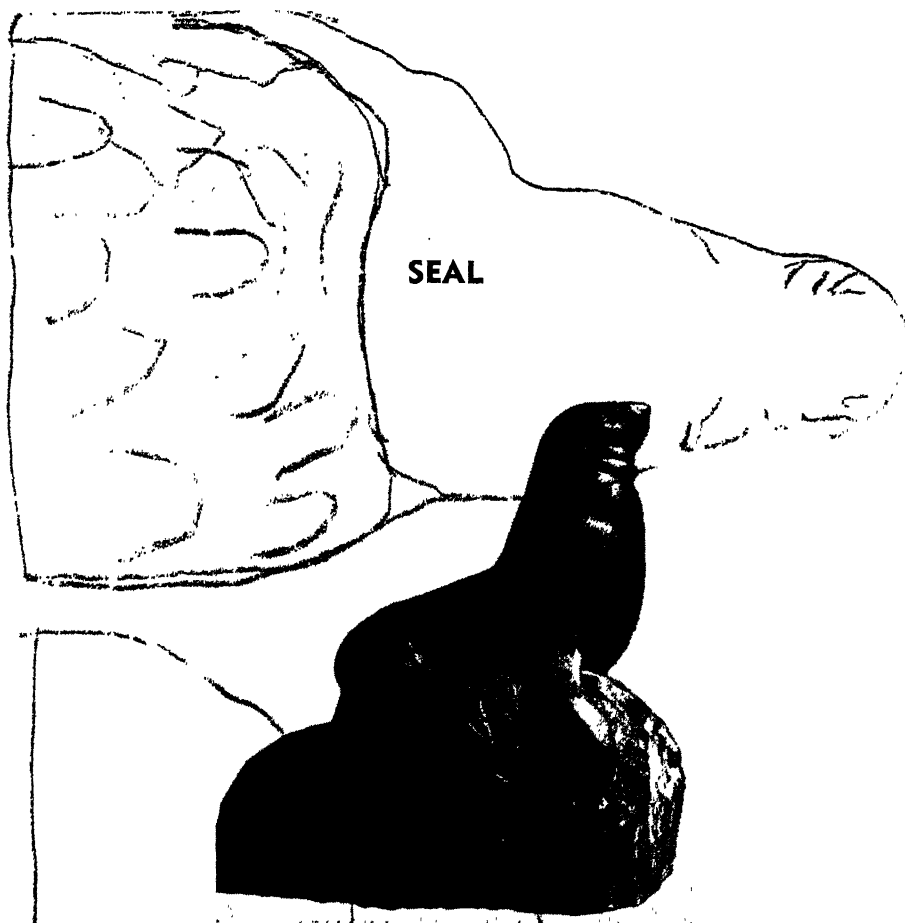


Fig. 118

This seal is really streamlined when decorated. That means that the whittled seal calls for some fine sandpapering. However, there are a few things that must be done first. Cut out the silhouette from a 3 by 4 $\frac{1}{4}$ by 5 $\frac{1}{4}$ -in. block of wood. The seal shown was whittled out of mahogany, but any softwood will do. The grain runs up and down.

After the block has been cut, lay out the top view as shown on page 100. Note that the seal is not exactly centered on the base. The front, side, and rear views are also shown in Figures 119 and 120. A crooked knife will save a lot of time in roughing out the seal. The finished whittling is not too difficult as every part is more or less rounded.

After finishing the whittling, smooth the seal with fine sandpaper being careful not to sand the base. The seal may then be given a coat of brown walnut stain. After wiping it carefully, let it dry, after which two coats of floor wax should be applied. As a last touch polish it with a soft cloth.

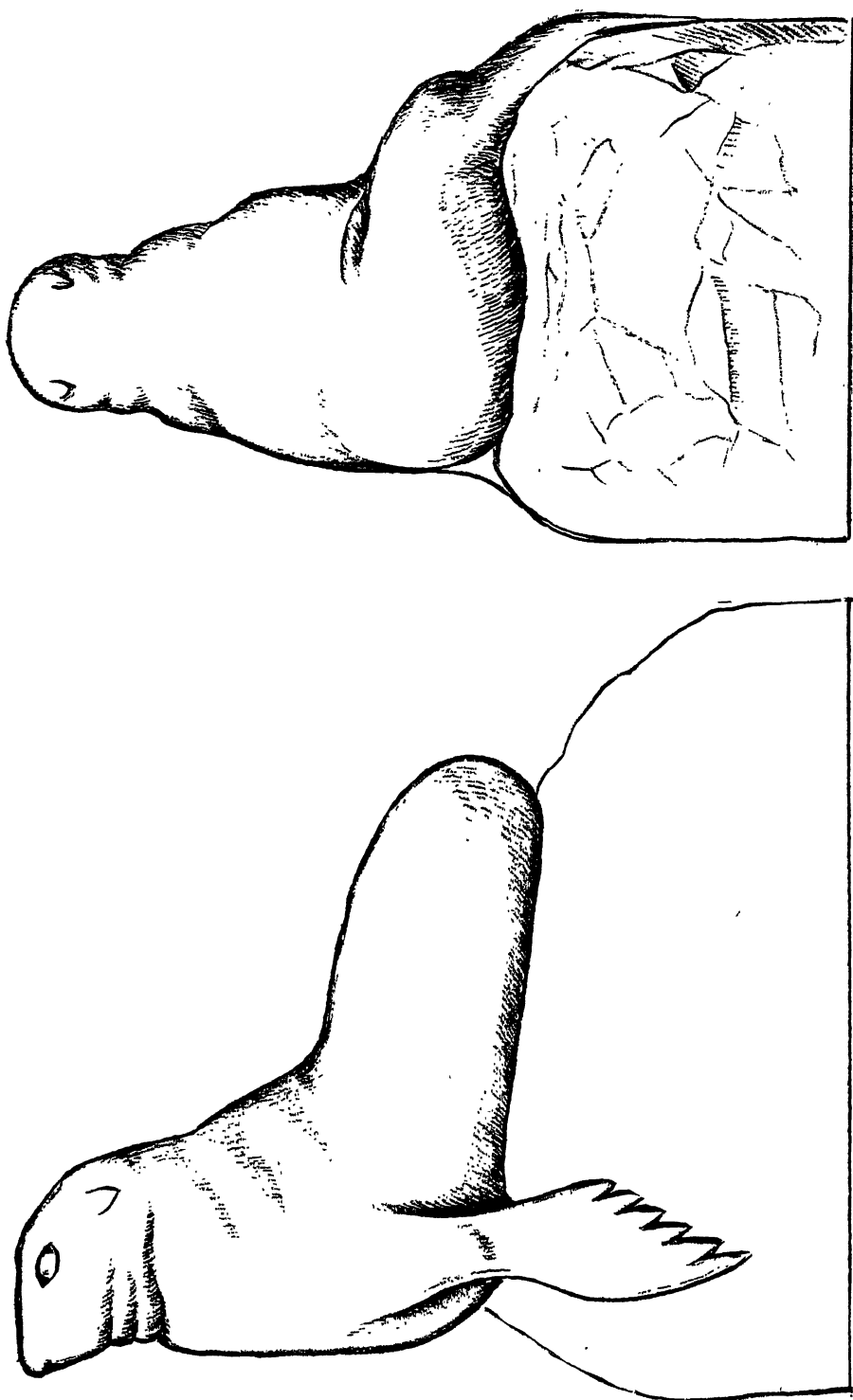


Fig. 119. Top and front views of seal

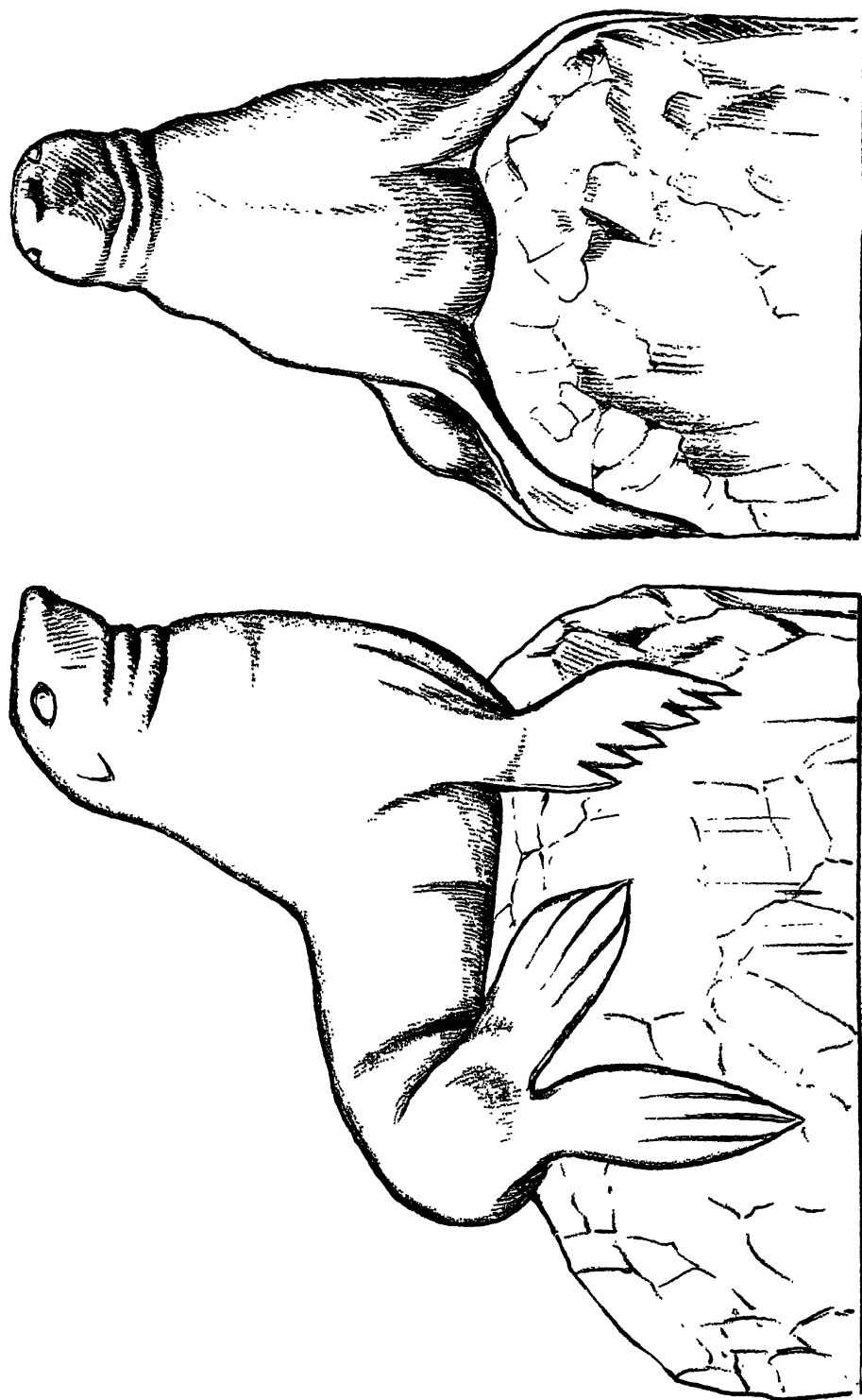
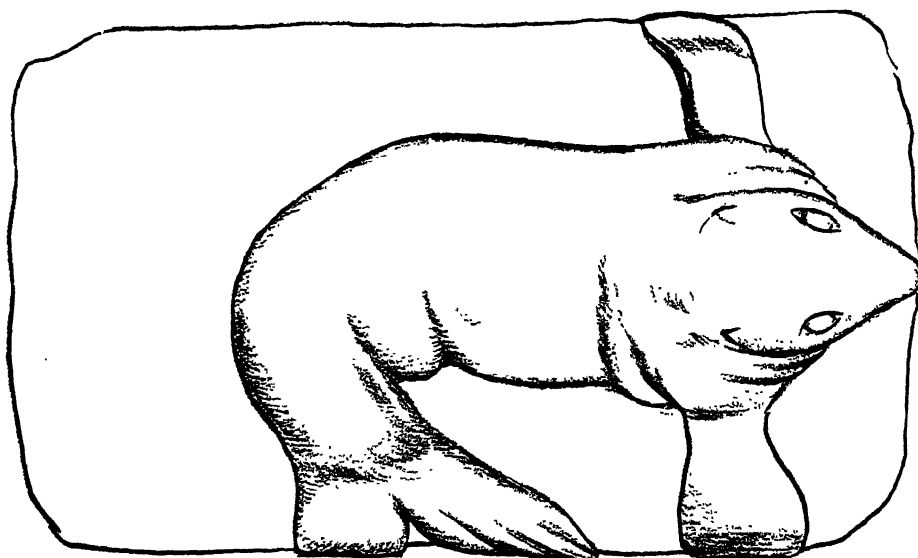


Fig. 120. Side and front views of seal. Top view appears on page 100



Top view of seal

If the seal is whittled of mahogany the same procedure should be followed. Use the thick stain from the bottom of the can because it will act as a filler to close or fill the pores that are so noticeable in mahogany. Figure 118 shows the seal after waxing and polishing.

PACK MULE

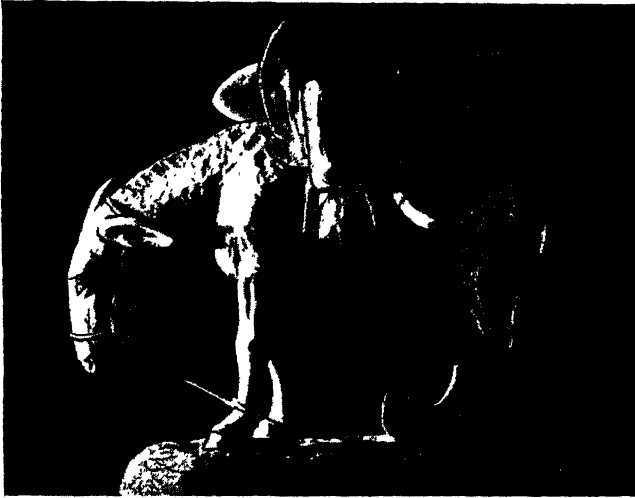
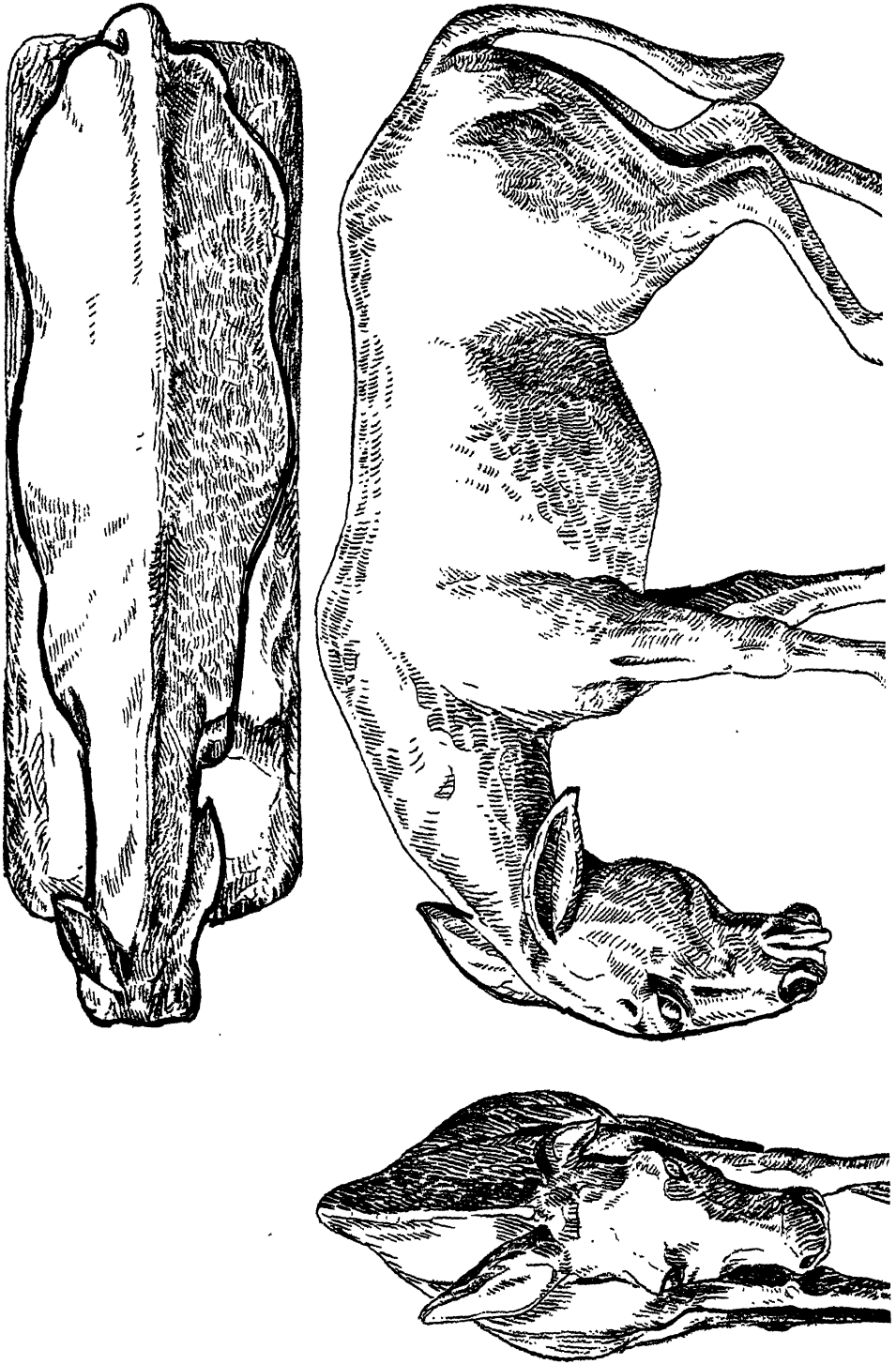


Fig. 121. Fully packed

The pack mule shown in Figures 121 and 125 is a rather interesting task. It may be whittled and used as a unit, or it may be loaded with the pack. The procedure is the same as that used for making the grizzly, that is, cutting out the silhouette from a piece of softwood, blocking out, and then whittling. After studying Figures 122 and 123, equip yourself with a sharp pocketknife and a crooked knife. Then with steady application you should have a loaded pack mule in a few evenings' time. The pack mule may be kept in the rough as illustrated or sanded to obtain a smoother finish. The rugged appearance of the carving is quite in keeping with the nature of the animal and of the mining country.

The packsaddle, tools, utensils, and packs (see Fig. 124), can be whittled out of scrap pieces. The packsaddle is made up of six pieces. The coffeepot is a solid piece of wood and the frying pan is hollowed out. The pickax is made of two pieces to avoid the narrow section of cross grain, and the packs are simply two pieces of wood cut to resemble bundles of blankets and a tent. The packsaddle is fastened on with two thin bands of basswood bark, using a bit of glue to fasten the ends together. The ropes are made by twisting together fibers of the inner white bark. There is a small hole drilled between the ear and the neck for the halter.



g. 122. Front, top, and left-hand side views of pack mule

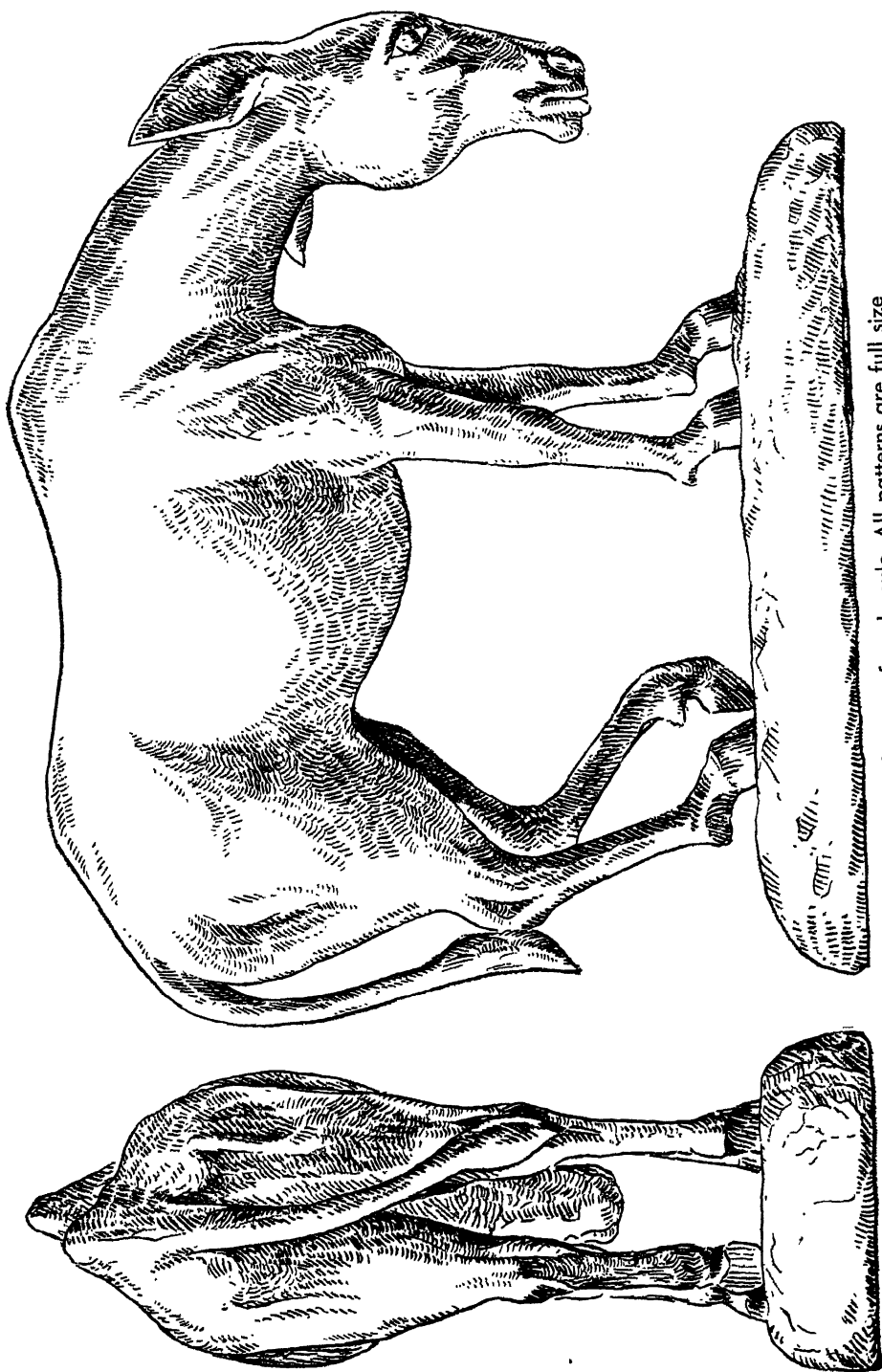


Fig. 123. Rear and right-hand views of pack mule. All patterns are full size

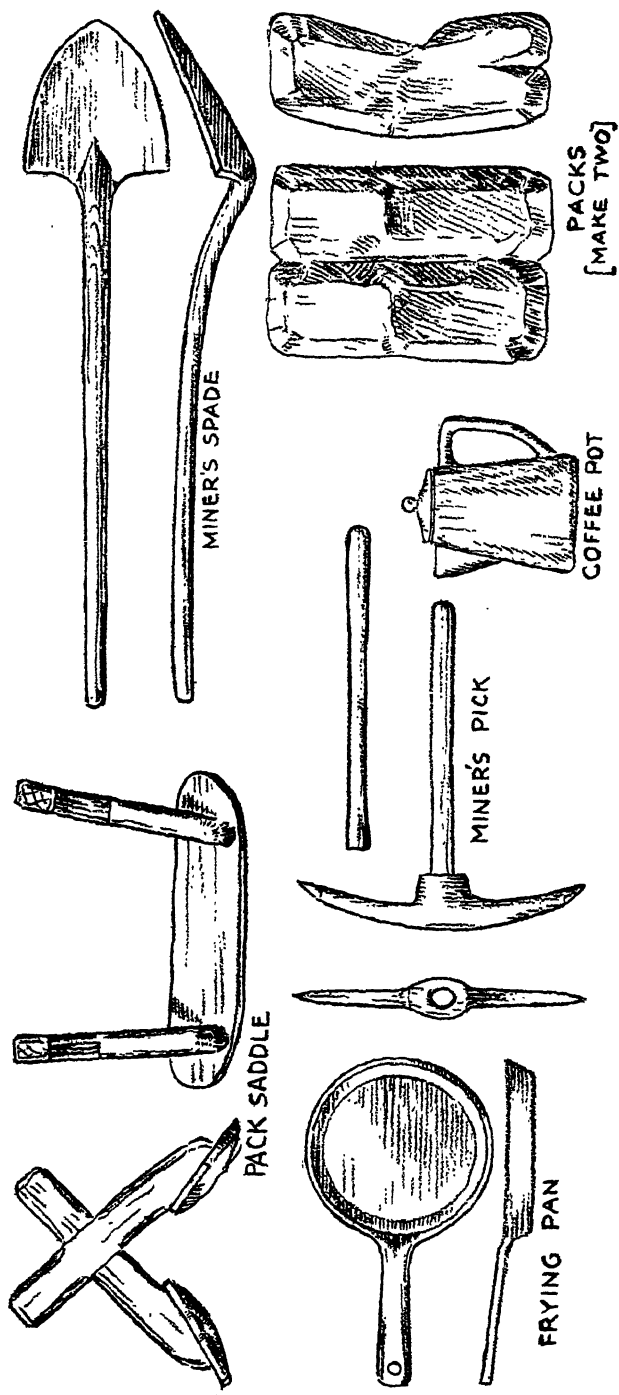


Fig. 124. Details of pack

Figure 121 shows how the mule is loaded. Fastening the pack onto the mule is much easier than trying to whittle the whole figure, mule and all, from one piece. Some may even wish to burden their mule with another kind of load such as camping and hunting equipment, or just a load of wood. If you wish to do the latter, get a bundle of 2½- and 3-in. twigs, some crooked and some straight, and trim the bark off. Then tie them onto the packsaddle.

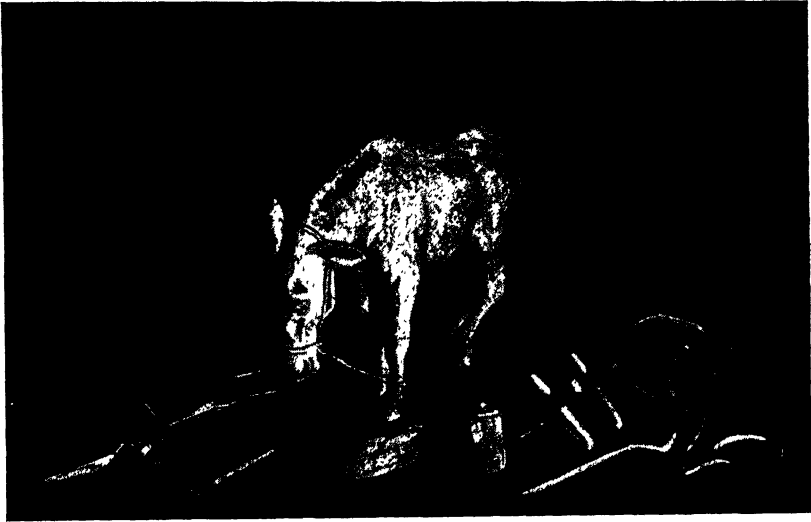


Fig. 125. Ready to be packed

WHITTLING SPIRALS

Anyone who does any amount of woodworking, and especially furniture making, will at sometime or other wish to learn spiral whittling.

Commercially, spirals are made on spindle lathes. However, when one wants to decorate a piece of furniture and only requires a few pieces, they can be whittled in a very satisfactory manner. There is nothing hard about it, simply a case of cutting with the grain.

The single spiral or corkscrew is the easiest to make. The simplest method of laying it out on the stick is with a long narrow strip of paper. The paper should be an even width, and if the stick is a perfect cylinder, it will practically space itself evenly as shown in Figure 126. Fasten the ends

with a pin or tack, then mark out the spiral along the edges with a pencil. Figure 127 shows how a piece of wire, the coils of which have been carefully spaced with a rule, may be used in laying out a spiral.

To lay out a double spiral, use a paper strip as shown in Figure 128, or lay it out as shown in Figure 129. For a $1\frac{1}{2}$ -in. diameter stick, the crosslines shown in the drawing should be be $1\frac{1}{2}$ in. apart. Mark with a pencil. To lay out an open spiral, use the same method as shown for the double spiral (see Fig. 128).

If the outer edges of the spirals are to be sharp, only one line is required. If the edges are to be cut to a certain width, a second line should be drawn, running parallel to the one marked first, and about $\frac{1}{8}$ in. from it. Figure 130 shows how the stick should look, marked for a single spiral.

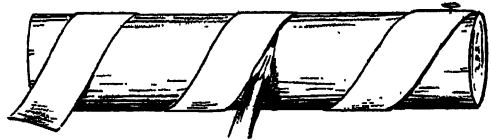


Fig. 126



Fig. 127

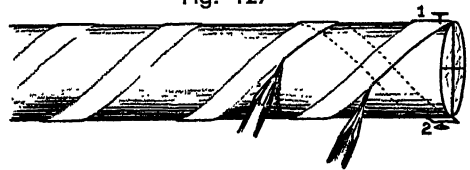


Fig. 128



Fig. 129



Fig. 130



Fig. 131



Fig. 132



Fig. 133

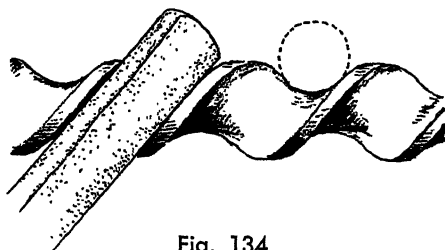


Fig. 134



Fig. 135

To start whittling, the easiest method is cutting a shallow V cut the full length of the stick. If a double spiral is to be cut, whittle the two cuts. Do not cut right up to the pencil line (see Fig. 131). Hold the knife as shown in Figure 21, page 19. Then, using the methods shown in Figures 20, 21, and 22, whittle until the spiral looks like Figures 132 and 133. Cut right up to the pencil lines and keep the ridge even.

Whittle one side first and then the other, ending the last cut at the bottom where the grain is straight. If a smooth-finished spiral is desired, finish with sandpaper wrapped around a round stick as shown in Figure 134.

Figure 135 shows a peace-pipe stem made with a double spiral. On this stem the spiral has a twist running from left to right. This is just as simple to whittle as one that twists in the opposite direction.

OPEN SPIRAL

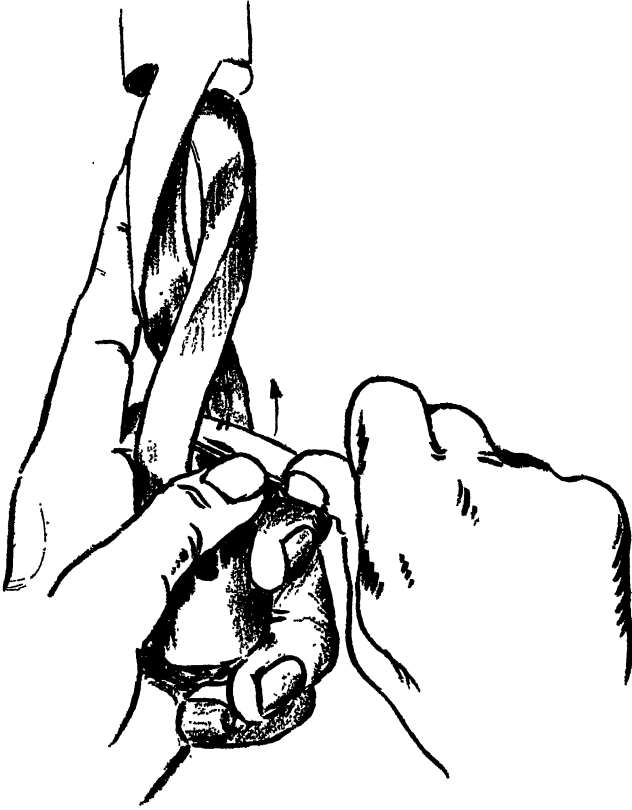


Fig. 136

When whittling an open spiral, like the one shown in Figures 136 and 137, cut it the same as the double spiral, the full length of both grooves. Then take a second cut, cutting the sides steeper; perhaps a third cut will be required before the V cuts meet in the center of the stick. From now on care must be taken and the grain must be watched. Hold the stick and knife as shown in Figure 136, to cut away the surplus core. Cut down the full length as shown, and then cut down on the other side.

Figure 137 shows an open spiral cut from a basswood limb. This was used for a rattle handle. While only single and double spirals are shown and described here, triple or quadruple spirals may also be cut. To lay

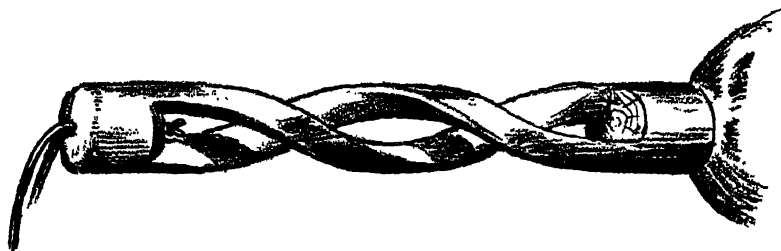


Fig. 137

out such spirals, simply divide the end of the stick into three or four parts as shown in Figure 138, then proceed in the same manner as was described for laying out single and double spirals.

Spirals may be cut deep or shallow depending on what they are to be used for. The deeper cut spirals have more grace while the shallow cut spirals have more strength. Whittling spirals is fun once the art has been mastered, and they can be incorporated and used for a great many articles in the furniture line.

Figure 139 shows a rounded spiral which is just the opposite of those shown in Figures 132 and 133 which more or less are hollowed out.

Lay out the spiral, whether single or double, as shown in Figures 126 to 128. Use a single line for the single twist, or two lines for the double. Notice that the pitch of the spiral in Figure 140 is less than those shown in Figures 132 and 133.

The pitch or slant, of course, is optional, but it also depends on what the particular piece is to be used for or how much work the whittler wishes to undertake. Start with a V cut as shown in Figure 140. Probably this will have to be cut deeper with a second V cut, depending upon the size of the work. Then with smaller cuts round up the work nicely and if desired, finish with sandpaper. Figure 139 shows a double spiral and should look like two vines twisting around each other when finished.

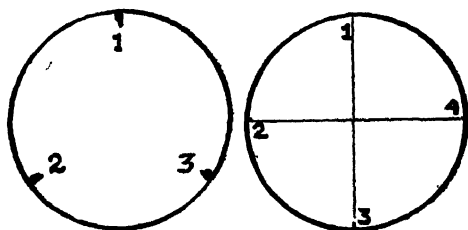


Fig. 138

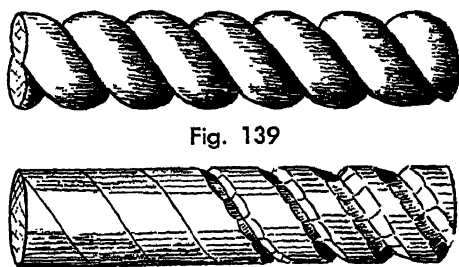


Fig. 139

Fig. 140



Fig. 141

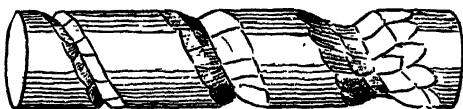


Fig. 142



Fig. 143

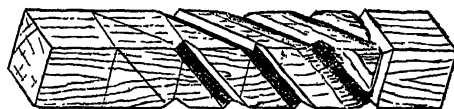


Fig. 144



Fig. 145

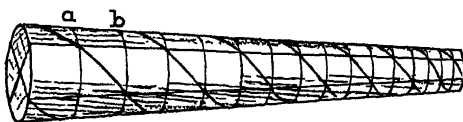


Fig. 146



Fig. 147

Figure 141 shows the Jacobean spiral, which is used a great deal in furniture and balusters.

Lay out for a single spiral and start with a V cut as shown in Figure 142, going the full length of the part to be whittled. Then go over the whole groove with a deeper cut, as shown at the right end of Figure 142, being careful to keep an even depth. From then on it is just a simple job to round the spirals. The twisted spirals should be carefully sanded, but if they have been whittled neatly and carefully, they will look well without sanding.

The square spiral, that is, a spiral cut from a square piece of wood, was used a great deal by the old Spanish settlers who did not have access to lathes. Some of the very attractive work of these early pioneers can still be seen in the Southwest.

Figure 143 shows a finished piece of square spiral with a long pitch. Lay out the square as shown in Figure 145. After laying it out, make the V cuts on all the slant lines as shown in Figure 144. Follow with a second cut as shown at the right side of Figure 144, taking off the shoulder at the same time. It will be noticed that the bottom points of the V cuts do not meet at the corners. To bring them in line, a smaller V cut must be made at a greater slant at the corners. After that, the finishing is practically the same as any other rounded spiral.

One more spiral that should be added to this series is a tapered one. Naturally, if the stick is tapered, the spiral, to be consistent, should taper

also. In other words, the intervals of the spiral should get shorter as the smaller end of the stick is approached.

To lay out a tapered spiral, draw equally spaced lines lengthwise. Starting at the larger end, take one half of the diameter at that point and draw the first crossline, *a*, that distance from the starting point, as shown in Figure 146. Then measure the diameter at *a* and draw the next line, *b*, one half of that diameter from *a*, and continue this to the end of the spiral. The spirals are then laid out like any of the others and, of course, the whittling is also the same, whether it be rounded, hollow, or open. Figure 147 shows a hollow or concave tapered spiral.

